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- <110> Ashkenazi, Avi J.
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 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
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 Roy, Margaret Ann
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 Zhang, Zemin
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 ggctgaaga ttcttggtt agagcatgcy agcattgaag gaccaatagc 1050
 aaacttatca gtacttgaa cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaacccactg gggaggtaga 1200
 ggaaatgaca gagaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtottaataa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
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 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg Ile Ile Gln Glu Arg Asn Gly Val Leu Pro Asp Cys Leu Thr
 155 160 165
 Asp Gly Ser Asp Val Val Ser Asp Leu Glu His Glu Glu Met Lys
 170 175 180
 Ile Leu Arg Glu Val Leu Arg Lys Ser Lys Glu Glu Tyr Asp Gln
 185 190 195
 Glu Glu Glu Arg Lys Arg Lys Lys Gln Ser Glu Ala Lys Thr
 200 205 210
 Glu Glu Pro Thr Val His Ser Ser Glu Ala Ala Ile Met Asn Asn
 215 220 225
 Ser Gln Gly Asp Gly Glu His Phe Ala His Pro Pro Ser Glu Val
 230 235 240
 Lys Met His Phe Ala Asn Gln Ser Ile Glu Pro Leu Gly Arg Lys
 245 250 255
 Val Glu Arg Ser Glu Thr Ser Ser Leu Pro Gln Lys Gly Leu Lys
 260 265 270
 Ile Pro Gly Leu Glu His Ala Ser Ile Glu Gly Pro Ile Ala Asn
 275 280 285
 Leu Ser Val Leu Glu Thr Glu Glu Leu Arg Gln Arg Glu His Tyr
 290 295 300
 Leu Lys Gln Lys Arg Asp Lys Leu Met Ser Met Arg Lys Asp Met
 305 310 315
 Arg Thr Lys Gln Ile Gln Asn Met Glu Gln Lys Gly Lys Pro Thr
 320 325 330
 Gly Glu Val Glu Glu Met Thr Glu Lys Pro Glu Met Thr Ala Glu
 335 340 345
 Glu Lys Gln Thr Leu Leu Lys Arg Arg Leu Leu Ala Glu Lys Leu
 350 355 360
 Lys Glu Glu Val Ile Asn Lys
 365

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 9
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 aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
 tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgtttgc agcagaagat ttactatct ttaaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

Chickadee

tcoctggaag aattctctga ttcatgaag tggccattc ctgcctttct 500
 ttatttctctg gataacttga ttgtcttcta tgtctctgcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatTTta gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctctgact ttatttttgt ctattgtggc ctgactgcc gggactaaaa 700
 ctttacagca caacttgga ggacgtggat ttcatacaga tgcctttttc 750
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt ttccagtcac atccgtcttg gcatgggcca tgttcttatt 900
 atagtccagt gttttatttc ttcactggct aatatctata atgaaaagat 950
 actgaaggag ggaaccagc tcaactgaaag catcttcata cagaacagca 1000
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 atgaagatac tttctaactg gtaccocat agtttgagc totcttgaac 1500
 cttattttca cattttcagt gtttgaata tttatctttt caotttgata 1550
 aaccagaaat gtttctaaat cctaatactt tttgcataa tctagctact 1600
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 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatata tttccaagag ttgaaatgct ggcttcagaa 2350
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 catactgtaa atatgagctt tatggtgtca ttctcagaaa cttatacatt 2750
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<210> 14
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Glu Lys Gln Cys Cys Ser His Pro Val Ile Cys Ser Leu Ser
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 Thr Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser
 20 25 30
 Ser Ser Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn
 35 40 45
 Lys Tyr Asp Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu
 50 55 60
 Val Lys Leu Val Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys
 65 70 75
 Lys Asp His Gln Ser Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu
 80 85 90
 Phe Ser Asp Phe Met Lys Trp Ser Ile Pro Ala Phe Leu Tyr Phe
 95 100 105
 Leu Asp Asn Leu Ile Val Phe Tyr Val Leu Ser Tyr Leu Gln Pro
 110 115 120

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
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ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150
tactacgggg ctgacagtt actgtctcag ctctaggatg tgcgttcttc 200
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 250
acagtgtctg agtcatcctg taatatgctc cttgtcaaca atgtatacat 300
tcctgctagc tgccatattc attgctttta gctcaagtcg catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaagtgt tgcctcagaac tggatgaagc agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtatgaattt gaaatatgct 500
tcctggaagg aattctctga tttcatgaag tggccattc ctgcctttct 550
ttatttctg gataacttga ttgtcttcta tgcctgtcc tatcttcaac 600
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ctttcagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcatcctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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cgcgcgccgg ccgctggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgog gggcagagga gcatcccgtc taccaggctc caagcggcgt 150
ggcccgccgg tcattggccaa aggagaagcg gccgagagcg gctccgccgc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300
ctttgtatg cacttggggg agcccccctac cagggtgacg gctgtgccct 350
gggtttcttc ctccagatct acctattgga tgtggctcag gtgggccctt 400
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gacccctcgg tgggcctcgt catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg cctcggatca tctctccac gccccctggc gtcattgcct 550
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tacctgcttt tctattgcct ctttgaaca atggtcacgt gttccatgt 650
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gcgtgcggga gcagagagaa ccctatgaag cccagcagtc tgagccaact 1000
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 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcaagtgtggc 1350
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 cactgtgggg ccggctgtct tgtggcctcc tgcctcccct gcctgtgctt 1950
 gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
 ggcttagccc ggaacactaa tgtagaaacc ttttttttac agagccta 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
 1 5 10 15
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val Leu
	110	115 120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly Gln
	125	130 135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val Ala
	140	145 150
Ser Gln Ser Ala	Asn His Thr His Gly Thr	Thr Ser His Arg Glu
	155	160 165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys Ile
	170	175 180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu Gln
	185	190 195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr Phe
	200	205 210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys Leu
	215	220 225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val Glu
	230	235 240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg Asn
	245	250 255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr Leu
	260	265 270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys Lys
	275	280 285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu Ile
	290	295 300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala Val
	305	310 315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu Pro
	320	325 330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys Gln
	335	340 345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr Val
	350	355 360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser Thr
	365	370 375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser Gln
	380	385 390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met Ala
	395	400 405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met Tyr
	410	415 420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430 435
 Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450
 Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

<400> 21
 gggaaacgca aaaggcatac ctgctggcag cgggggcat tgtctgtatc 50
 tataatact gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
 accctatgaa gccacgacgt ctgagccaat cgcctacttc cggggcctac 150
 ggctggctcat gagccacggc ccatacatca aactttattc tggcttcctc 200
 ttcacctcct tggctttcat gctggtgagg gggaactttg tctgtttttg 250
 cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctccctggcca 300
 tcatgctctc ggccaactta accattccca tctggcagtg gttcttgacc 350
 cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
 atttctcatc ttggtggccc tcatggagag taacctcatc attacatatg 450
 cggtagctgt ggcagctggc ctcatgttgg cagctgcctt cttactacct 500
 tgggtccatgc tgccctgatgt cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagccca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 22
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 aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
 aaacagaaaa cctgttagaa atgtggtggt ttcagaaagg cctcagtttc 150
 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
 cactactgca gtaacactcc accatataga ccgggcttta ctttatatca 250
 gtgacactgg tacagtagct ccagaaaaat gcttattttg ggcaatgcta 300
 aatattgagg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaaagg 400
 ctggccttgt acttgggaata ctgagttgtt taggactttc tattgtggca 450

aacttcaga aaacaaccct ttttgtgca catgtaagtg gagctgtgct 500
taccttttgg atgggctcoat tatatatgtt tgttcagacc atccttttct 550
accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctgggtgag agtaagtgca cttagcatgc tgacttgcct 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
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tcgtgatttt cagaaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctta tgacactgca cttgacctta ttaacaatga acgaacacgg 900
ctactttcca gagatatattg atgaaaggat aaaatatctt tgtaatgatt 950
atgatttcca gggattgggg aaagggtcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacct gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
1 5 10 15
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctggttaga aatgtggtgg ttccagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgcgc tgctgcccg agtgcaagtg agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgogcccg ttctcgccct 100
cettctgtgc ttgcgcggt gcaccttgcg cttgtacttg ctgtcgacgc 150
gactgccccc cgggcggaga ctgggctcca ccgaggagcg tggaggcagg 200
tcgtctgtgt tcccctcga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccagcg ctaogtgctt ctgctcttct 300
gcggcgccca cctctacaaa cagggccttg ccatcccccg ctccagcttc 350
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gtgctgtgtg ttgacctcg tgggtgccac atgctgtct acgtctctcca 450
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tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggtttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100
 agaaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gtccaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaaat acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcagagaaat tgcttgaacc aaggtggcag aggttgcagt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28
 <211> 264
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Arg Pro Leu Leu Gly Leu Leu Leu Val Phe Ala Gly Cys Thr
 1 5 10 15
 Phe Ala Leu Tyr Leu Leu Ser Thr Arg Leu Pro Arg Gly Arg Arg
 20 25 30
 Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro
 35 40 45
 Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu
 50 55 60
 Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
 65 70 75
 Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
 80 85 90
 Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
 95 100 105
 Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
 110 115 120
 Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
 125 130 135
 Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
 140 145 150
 Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
 155 160 165
 Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
 170 175 180
 Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
 185 190 195
 Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
 200 205 210

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
 ccgaggcggg aggagccga gggggcgca gcccgcgatg aatcattgta 50
 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctccagagacc cccccgcag tatcctctcc ttatagtgtg gtataagggt 350
 ctccgaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttagcccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
 gctcactcat ccateacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctgggtggac aaacgactgt gaggcagaatg 600
 agtcagagcc cattcctgcc aactgcactg gctgtgccca gaaacacctg 650
 aaggtgatgc tcctggaaga cgccccaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agccoctgtt ggagggaagag attcagcatt 750
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga agggtttttc 800
 gccaaagtgt ggcgtgctt tcctgagcgg tggttcccat ttcttatacc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctctg 900
 ttttactcoa cctgccattt ccaaagatg cctctttaa caagtgtctcc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctattttatc attggcagcg gtgaggcoat gttgcagcto atccctccct 1050
 tccagtgcog agacacattgt cagtctgtgg coactgccaat agagccaggg 1100
 gatatcggtc atgtcgacac caccactggg aaggtctacg ttatagccag 1150

aggggtccag cctttgtgca tctgcgatgg aaccgcttcc tcagaactgt 1200
 aggaataaga actgtgcaca ggaacagctt ccagagccga aaaccagggt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30

<211> 347

<212> PRT

<213> Homo sapiens

<400> 30

Met	Asp	Leu	Ala	Ala	Asn	Glu	Ile	Ser	Ile	Tyr	Asp	Lys	Leu	Ser	1	5	10	15
Glu	Thr	Val	Asp	Leu	Val	Arg	Gln	Thr	Gly	His	Gln	Cys	Gly	Met	20	25	30	
Ser	Glu	Lys	Ala	Ile	Glu	Lys	Phe	Ile	Arg	Gln	Leu	Leu	Glu	Lys	35	40	45	
Asn	Glu	Pro	Gln	Arg	Pro	Pro	Pro	Gln	Tyr	Pro	Leu	Leu	Ile	Val	50	55	60	
Val	Tyr	Lys	Val	Leu	Ala	Thr	Leu	Gly	Leu	Ile	Leu	Leu	Thr	Ala	65	70	75	
Tyr	Phe	Val	Ile	Gln	Pro	Phe	Ser	Pro	Leu	Ala	Pro	Glu	Pro	Val	80	85	90	
Leu	Ser	Gly	Ala	His	Thr	Trp	Arg	Ser	Leu	Ile	His	His	Ile	Arg	95	100	105	
Leu	Met	Ser	Leu	Pro	Ile	Ala	Lys	Lys	Tyr	Met	Ser	Glu	Asn	Lys	110	115	120	
Gly	Val	Pro	Leu	His	Gly	Gly	Asp	Glu	Asp	Arg	Pro	Phe	Pro	Asp	125	130	135	
Phe	Asp	Pro	Trp	Trp	Thr	Asn	Asp	Cys	Glu	Gln	Asn	Glu	Ser	Glu	140	145	150	
Pro	Ile	Pro	Ala	Asn	Cys	Thr	Gly	Cys	Ala	Gln	Lys	His	Leu	Lys	155	160	165	
Val	Met	Leu	Leu	Glu	Asp	Ala	Pro	Arg	Lys	Phe	Glu	Arg	Leu	His	170	175	180	
Pro	Leu	Val	Ile	Lys	Thr	Gly	Lys	Pro	Leu	Leu	Glu	Glu	Glu	Ile	185	190	195	
Gln	His	Phe	Leu	Cys	Gln	Tyr	Pro	Glu	Ala	Thr	Glu	Gly	Phe	Ser	200	205	210	
Glu	Gly	Phe	Phe	Ala	Lys	Trp	Trp	Arg	Cys	Phe	Pro	Glu	Arg	Trp	215	220	225	
Phe	Pro	Phe	Pro	Tyr	Pro	Trp	Arg	Arg	Pro	Leu	Asn	Arg	Ser	Gln	230	235	240	
Met	Leu	Arg	Glu	Leu	Phe	Pro	Val	Phe	Thr	His	Leu	Pro	Phe	Pro	245	250	255	

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345

Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cgtttttcgc ccggcggcag ctgtcccca ggccggaggga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtaaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtgggtt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgcca cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agacgggcca tcagtgtggc atgtcagaga aggaacttga 300
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttggga 400
 ttaattcttc tcaactgcta ctttgtgatt caacctttca gccattagc 450
 aactgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cgcccacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccactgatga ggcagggtcc ccacttcgag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgcagacgc 150
 tgcctatgag ccgctggggc tgcagtgagg actgccctcc tgcacaccca 200
 ccaatggcag cccacacctc ttggaagact tccaggcttt ttgtgccaca 250

gttacccct cagggatttg cgggcggaag tcccgccct cgccggctga 3500
 ggggcgcgcc tgagggccag cactggcgctc t 3531

<210> 33
 <211> 1003
 <212> PRT
 <213> Homo sapiens

<400> 33
 Met Ser Gln Phe Glu Met Asp Thr Tyr Ala Lys Ser His Asp Leu
 1 5 10 15
 Met Ser Gly Phe Trp Asn Ala Cys Tyr Asp Met Leu Met Ser Ser
 20 25 30
 Gly Gln Arg Arg Gln Trp Glu Arg Ala Gln Ser Arg Arg Ala Phe
 35 40 45
 Gln Glu Leu Val Leu Glu Pro Ala Gln Arg Arg Ala Arg Leu Glu
 50 55 60
 Gly Leu Arg Tyr Thr Ala Val Leu Lys Gln Gln Ala Thr Gln His
 65 70 75
 Ser Met Ala Leu Leu His Trp Gly Ala Leu Trp Arg Gln Leu Ala
 80 85 90
 Ser Pro Cys Gly Ala Trp Ala Leu Arg Asp Thr Pro Ile Pro Arg
 95 100 105
 Trp Lys Leu Ser Ser Ala Glu Thr Tyr Ser Arg Met Arg Leu Lys
 110 115 120
 Leu Val Pro Asn His His Phe Asp Pro His Leu Glu Ala Ser Ala
 125 130 135
 Leu Arg Asp Asn Leu Gly Glu Val Pro Leu Thr Pro Thr Glu Glu
 140 145 150
 Ala Ser Leu Pro Leu Ala Val Thr Lys Glu Ala Lys Val Ser Thr
 155 160 165
 Pro Pro Glu Leu Leu Gln Glu Asp Gln Leu Gly Glu Asp Glu Leu
 170 175 180
 Ala Glu Leu Glu Thr Pro Met Glu Ala Ala Glu Leu Asp Glu Gln
 185 190 195
 Arg Glu Lys Leu Val Leu Ser Ala Glu Cys Gln Leu Val Thr Val
 200 205 210
 Val Ala Val Val Pro Gly Leu Leu Glu Val Thr Thr Gln Asn Val
 215 220 225
 Tyr Phe Tyr Asp Gly Ser Thr Glu Arg Val Glu Thr Glu Glu Gly
 230 235 240
 Ile Gly Tyr Asp Phe Arg Arg Pro Leu Ala Gln Leu Arg Glu Val
 245 250 255
 His Leu Arg Arg Phe Asn Leu Arg Arg Ser Ala Leu Glu Leu Phe
 260 265 270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg
995 1000

<210> 34
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35
<211> 1395
<212> DNA
<213> Homo sapiens

<400> 35
cgagcgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctctgc ccagggctga 100
tgtgcgtctt ccagggtac tcatccaaag gcctaatacca acgttctgtc 150
ttcaatctgc aaatctatgg ggtctctggg ctctttctgga cccttaactg 200
ggtactggcc ctgggccaat gcgtctctgc tggagccttt gcctccttct 250
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaactctt 300
gccttcaccc gcacactccg ttaccacact gggtcattgg catttggagc 350
cctcatcctg accttctgtc agatagcccg ggtcatcttg gagtatatgt 400
accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
gtcctggaca aagtcacaga cctgctgtgt ttctttggga agctgctggt 650

Lys Leu Arg Gly Val Gln Asn Pro Val Ala Arg Cys Ile Met Cys
 140 145 150
 Cys Phe Lys Cys Cys Leu Trp Cys Leu Glu Lys Phe Ile Lys Phe
 155 160 165
 Leu Asn Arg Asn Ala Tyr Ile Met Ile Ala Ile Tyr Gly Lys Asn
 170 175 180
 Phe Cys Val Ser Ala Lys Asn Ala Phe Met Leu Leu Met Arg Asn
 185 190 195
 Ile Val Arg Val Val Val Leu Asp Lys Val Thr Asp Leu Leu Leu
 200 205 210
 Phe Phe Gly Lys Leu Leu Val Val Gly Gly Val Gly Val Leu Ser
 215 220 225
 Phe Phe Phe Phe Ser Gly Arg Ile Pro Gly Leu Gly Lys Asp Phe
 230 235 240
 Lys Ser Pro His Leu Asn Tyr Tyr Trp Leu Pro Ile Met Thr Ser
 245 250 255
 Ile Leu Gly Ala Tyr Val Ile Ala Ser Gly Phe Phe Ser Val Phe
 260 265 270
 Gly Met Cys Val Asp Thr Leu Phe Leu Cys Phe Leu Glu Asp Leu
 275 280 285
 Glu Arg Asn Asn Gly Ser Leu Asp Arg Pro Tyr Tyr Met Ser Lys
 290 295 300
 Ser Leu Leu Lys Ile Leu Gly Lys Lys Asn Glu Ala Pro Pro Asp
 305 310 315
 Asn Lys Lys Arg Lys Lys
 320

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtcttaacc agcccgga tgcg 24

<210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggctcctgg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac cgccgccggg ctcttggtac ctccagcgga ggcagggcg 50
tccggccgcc gtggctatgt tcgtgtccga ttccgcaaa gattctctac 100
aggtggtcca gagccagagg gtccttctct tcgtggcctc ggacgtggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctgggtccag ttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
gctaattgag acctattgga tattcttcaa cctgatgaag acactatatt 350
ctttgtgtgt gactccata ggccagtcga tgcgtcaat gtatacaacg 400
atacccgatg caaattactc attaaacaag atgatgaact tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgcaac cggttagaag 550
aggagatagt ggagcaaac atgcggagga ggcagcgccg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgta gocatggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggocatgg ttggaactaa agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctccgt ggaactgcaca cgcatctcct ttgagtatga cctccgcctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000
aggagtctct tcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100
agagctctga aataaatttg ggatgaagga catgcgcgtg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtgtctctt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct caggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccagcag 1350
 accattgcca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

245					250					255						
Asn	Glu	Asp	Glu	260	Asn	Thr	Leu	Ser	265	Val	Asp	Cys	Thr	Arg	Ile	270
Ser	Phe	Glu	Tyr	275	Leu	Arg	Leu	Val	280	Leu	Tyr	Gln	His	Trp	Ser	285
Leu	His	Asp	Ser	290	Leu	Cys	Asn	Thr	295	Tyr	Thr	Ala	Ala	Arg	Phe	300
Lys	Leu	Trp	Ser	305	Val	His	Gly	Gln	310	Arg	Leu	Gln	Glu	Phe	Leu	315
Ala	Asp	Met	Gly	320	Leu	Pro	Leu	Lys	325	Val	Lys	Gln	Lys	Phe	Gln	330
Ala	Met	Asp	Ile	335	Leu	Lys	Glu	Asn	340	Arg	Glu	Met	Ile	Glu	Glu	345
Glu	Ser	Ala	Asn	350	Lys	Phe	Gly	Met	355	Asp	Met	Arg	Val	Gln	Thr	360
Phe	Ser	Ile	His	365	Phe	Gly	Phe	Lys	370	Lys	Phe	Leu	Ala	Ser	Asp	375
Val	Val	Phe	Ala	380	Thr	Met	Ser	Leu	385	Glu	Ser	Pro	Glu	Lys	Asp	390
Gly	Ser	Gly	Thr	395	Asp	His	Phe	Ile	400	Ala	Leu	Asp	Ser	Leu	Ser	405
Arg	Ser	Asn	Leu	410	Asp	Lys	Leu	Tyr	415	Gly	Leu	Glu	Leu	Ala	Lys	420
Lys	Gln	Leu	Arg	425	Ala	Thr	Gln	Gln	430	Ile	Ala	Ser	Cys	Leu	Cys	435
Thr	Asn	Leu	Val	440	Ile	Ser	Gln	Gly	445	Phe	Leu	Tyr	Cys	Ser	Leu	450
Met	Glu	Gly	Thr	455	Pro	Asp	Val	Met	460	Phe	Ser	Arg	Pro	Ala	Ser	465
Leu	Ser	Leu	Leu	470	Ser	Lys	His	Leu	475	Lys	Ser	Phe	Val	Cys	Ser	480
Thr	Lys	Asn	Arg	485	Arg	Cys	Lys	Leu	490	Pro	Leu	Val	Met	Ala	Ala	495
Pro	Leu	Ser	Met	500	Glu	His	Gly	Thr	505	Val	Val	Val	Gly	Ile	Pro	510
Pro	Glu	Thr	Asp	515	Ser	Ser	Asp	Arg	520	Asn	Phe	Phe	Gly	Arg	Ala	525
Phe	Glu	Lys	Ala	530	Ala	Glu	Ser	Thr	535	Ser	Arg	Met	Leu	His	Asn	540
His	Phe	Asp	Leu	545	Ser	Val	Ile	Glu	550	Lys	Ala	Glu	Asp	Arg	Ser	555
Lys	Phe	Leu	Asp		Ala	Leu	Ile	Ser		Leu	Leu	Ser				

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50
 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgctgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
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 <223> N-glycosylation Site

<220>
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 <223> C1q Domain Proteins

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 35 40 45
 Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
 50 55 60
 Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
 65 70 75
 Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
 80 85 90
 Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
 95 100 105
 Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
 110 115 120
 Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
 125 130 135
 His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
 140 145 150
 Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
 155 160 165
 Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
 170 175 180
 Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
 185 190 195
 Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

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Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
	230		235		240
Asn Asp Phe Asp Thr Tyr Ile Thr Phe Ser Gly His Leu Ile Lys					
	245		250		255
Ala Glu Asp Asp					

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<210> 50
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<212> PRT

<213> Homo sapiens

<400> 52

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Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	
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Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	
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<223> Synthetic oligonucleotide probe

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<220>
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<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

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Ser	Val	Phe	Arg	Cys 440	Leu	Pro	Lys	Ser	Ile 445	Gln	Ile	Leu	Asp	Leu 450
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Met	Ala	Leu	Arg	Glu 470	Leu	Asn	Ile	Ala	Phe 475	Asn	Phe	Leu	Thr	Asp 480
Leu	Pro	Gly	Cys	Ser 485	His	Phe	Ser	Arg	Leu 490	Ser	Val	Leu	Asn	Ile 495
Glu	Met	Asn	Phe	Ile 500	Leu	Ser	Pro	Ser	Leu 505	Asp	Phe	Val	Gln	Ser 510
Cys	Gln	Glu	Val	Lys 515	Thr	Leu	Asn	Ala	Gly 520	Arg	Asn	Pro	Phe	Arg 525
Cys	Thr	Cys	Glu	Leu 530	Lys	Asn	Phe	Ile	Gln 535	Leu	Glu	Thr	Tyr	Ser 540
Glu	Val	Met	Met	Val 545	Gly	Trp	Ser	Asp	Ser 550	Tyr	Thr	Cys	Glu	Tyr 555
Pro	Leu	Asn	Leu	Arg 560	Gly	Thr	Arg	Leu	Lys 565	Asp	Val	His	Leu	His 570
Glu	Leu	Ser	Cys	Asn 575	Thr	Ala	Leu	Leu	Ile 580	Val	Thr	Ile	Val	Val 585
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Gly	Ser	Ile	Leu	Ile 665	Cys	Leu	Tyr	Glu	Ser 670	Tyr	Phe	Asp	Pro	Gly 675
Lys	Ser	Ile	Ser	Glu 680	Asn	Ile	Val	Ser	Phe 685	Ile	Glu	Lys	Ser	Tyr 690
Lys	Ser	Ile	Phe	Val 695	Leu	Ser	Pro	Asn	Phe 700	Val	Gln	Asn	Glu	Trp 705
Cys	His	Tyr	Glu	Phe 710	Tyr	Phe	Ala	His	His 715	Asn	Leu	Phe	His	Glu 720

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 ctttttgtaa atgttgctgc ctcatcgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggttaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

					185					190					195
Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr	210
				200					205						
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr	225
				215					220						
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys	240
				230					235						
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu	255
				245					250						
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr	270
				260					265						
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys	285
				275					280						
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn	300
				290					295						
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp	315
				305					310						
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val	330
				320					325						
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly	345
				335					340						
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp	360
				350					355						
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile	375
				365					370						
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Ser	390
				380					385						
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala	405
				395					400						
Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro	420
				410					415						
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser	435
				425					430						
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile	450
				440					445						
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu	465
				455					460						
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr	480
				470					475						
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala	495
				485					490						
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe	

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
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<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
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cccagccccg gcttcagctc ttccocagggt gttgaactca gctccagctt 150
cagctccagc tccaggctcg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtccagcttg tttccaatt tcacggctc cgtggatgac 250
cgtgggacct gccagtctc tgttccctg ccagacacca ctttccctg 300
ggacagagtg gaacgcttg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400
tatgaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacctg aactggactt cgagctgctc aaggtagaag 500
tgaaggagat ggaanaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggaggtg gagataagaa atatgactct 600
cttggtagag aagcttgaga cactagacaa aaacaatgtc ctggccattc 650
gccgagaaat cgtggctctg aagaccaagc tgaagagtg tgaggcctct 700
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cccagcatc caaacaaggt actgtattgg gtggcccat tgaatacaga 900

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 gaatattgcc agagttaacc tgaccaccaa cagatttgct gtgactcaaa 1100
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aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattg 2550
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aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	
				215					220					225	
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	
				230					235					240	
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	
				245					250					255	
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	
				260					265					270	
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	
				275					280					285	
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	
				290					295					300	
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	
				305					310					315	
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	
				320					325					330	
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	
				335					340					345	
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	
				350					355					360	
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	
				365					370					375	
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	
				380					385					390	
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	
				395					400					405	
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	
				410					415					420	
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	
				425					430					435	
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	
				440					445					450	
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	
				455					460					465	
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	
				470					475					480	
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	
				485					490					495	
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln	
				500					505					510	

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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cttatctata tgggtgcttg ggtagggtt actctcccca gcatccaaac 200

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gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300

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taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgttg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

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 tgggctgtg ctccatggcg agctggatac catgtttgtg tggaaagtgc 150
 ccgtgtttgc tatgccgatg ctgtcctagt ggaacaact ccactgtaac 200
 tagattgatc tatgcacttt tcttgcttgt tggagtatgt gtactgtgtg 250
 taatgttgat accaggaatg gaagaacaac tgaataagat tccgtggattt 300
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 cacaatggat ttgtgttctt taaatttgct gcagcaattg caattattat 500
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

agcagtgatc cttagagctgc agtgcacaat ggattttggt tctttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt ontggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtgtt gntatgccga 100
tgctgtccta gtgaaacaa ntccactgta attagattga tntatgcact 150
tttnttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgccctt gtaacatttt ggttggtat aaagctgtat atngtttttg 300
ctttggttg gctangttct atnttcttct ctotttacta atgatcaaag 350
tgaagagtag cagtgatct agagctgacg tgcacaatgg attttggtt 400
tttaaattg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
aagaagctgt ctccatcttg tctgtatccg ctgetcttgt gaacgttntg 50
gagatgggga gctgccttgg ggttggtgct catggcgagc tggataccat 100
gtttgtgtgg aagtgcctcg tgtttgctat gccgatgtg tctagtgtga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgettgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt ccttgtgaac 300
attttggttg gctataaagc tgtatatcgt ttgtgcttgg gtttggtat 350
gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagtg 400
atcctagagc tgcagtgac aatggatttt ggttctttaa atttgcgtga 450
gcaattgcaa ttattattgg ggc 473

0-678-9000

[illegible][illegible]

0-678-9000

0-678-9000

0-678-9000

0-678-9000

[illegible][illegible][illegible]

<212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 80
 aatccattgt gcactgcagc tctagg 26
 <210> 81
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 81
 gagcatgccca ccaactggact gac 23
 <210> 82
 <211> 54
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 82
 gccgatgctg tcctagtggg aacaactcca ctgtaactag attgatctat 50
 gcac 54
 <210> 83
 <211> 3906
 <212> DNA
 <213> Homo sapiens

<400> 83
 ctgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggctc 50
 gcggcgcgcg ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
 cgcgaggctt tcggcaaagg cagtgcagtg tttgcagacc ggggcgagtc 150
 ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
 agcgcccgcg cggggctgtc gcactccccc cggaacattt ggctccctcc 250
 agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
 tttccagcca agtggaacct atcgatggcc ctccctgaatt taccagata 350
 tttgatttat tagcgatgcc ccctgggttg tgtgttacgc acacacacgt 400
 gcacacaagg ctctggctcg ctccctccc tcgtttccag ctctggggc 450
 aatccacat ctgtttcaac tctccgcga gggcgagcag gagcgagagt 500
 gtgtcgaatc tcgagtgaa gagggagcag ggaaaagaaa caaagccaca 550
 gagcgaactt gagactccc catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggcccccca gcctcgtgct gtgcttgctg tccgcaactg 650
 tgtttccct gctgggtgga agctcggcct tctgtgcga ccaccgctg 700
 aaaggcagg ttccagaggga ccgcaggaa atccgcccc acatcatcct 750
 ggtgctgacg gacgaccagg atgtggagct gggttccatg cagggtgatga 800
 acaagaccog gcgcatcatg gagcaggcg gggcgacct catcaacgcc 850
 ttcgtgacca caccatgtg ctgccccca cgtctctcca tctcactgg 900
 caagtacgtc cacaaccaca acacctacac caacaatgag aactgctcct 950
 cgccctcctg gcaggcacag cagcagagcc gcaccttgc cgtgtacctc 1000
 aatagcactg gctaccggac agctttcttc ggaagtatc ttaatgaata 1050
 caacggctcc tacgtgccac cggcgtgga ggagtgggtc ggactcctta 1100
 aaaactccc cttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150
 aagcacggct ccgactactc caaggattac ctacagacc tcatcaccaa 1200
 tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacagcg 1250
 cagtcctcat ggtcatcagc catgcagccc ccacggccc tgaggattca 1300
 gcccacaa attcacgct cttcccaaac gcatctcagc acatcacgcc 1350
 gagctacaac tacgcgcca acccggaaca aactggatc atgcgtaca 1400
 cggggcccat gaagccatc cacatggaat taccacatc gctccagcg 1450
 aagcgcttc agacctcat gtoggtggac gactccatg agacgattta 1500
 caacatgctg gttgagacg gcgagctgga caacacgtac atcgtataca 1550
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 tccatgccat atgagtttga catcagggtc ccgttctacg tgaggggccc 1650
 caacgtggaa gcggcgtgc tgaatcccca catcgtcctc aacattgacc 1700
 tggcccccac catectggac attgcaggcc tggacatacc tgcggatatg 1750
 gacgggaaat ccatcctcaa gctgctggac acggagcgcg cggatgaatc 1800
 gtttcaactg aaaaagaaga taggggtctg gcgggactcc tcttgggtg 1850
 agagaggcaa gctgctacac aagagagaca atgacaaggt ggaogcccag 1900
 gaggagaact ttctgcccc gtaaccagct gtgaaggacc tgtgtcagcg 1950
 tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtggt 2000
 tggaggacgc cacggggaag ctgaagctgc ataagtgaac gggccccatg 2050
 cggctggcg gcagcagac cctctccaac ctctgcccc agtactacgg 2100
 gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
 tggccggacg ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat 2200

tttacatgta atcaacatgg gaacttttag gggaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

<213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 85
 gaagccgggt gtctgaatc 19
 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 ggccagctat ctccgcag 18
 <210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 87
 aagggcctgc aagagaag 18
 <210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggccggtg aatcggttcc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
aacaagttc agtgactgag agggctgagc ggaggctgct gaaggggaga 50
aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
tgggcctect ggggagcaca gccctcgtgg gatggatcac agtgctgctct 150
gtggcggtcc tgctgctgct gctgctgctg gccacotgcc ttttccacgg 200
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaaacc 250
gagtcgcgcg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300
atcttttacc atcaccgtca tcttggtccac gtatctcatg tgccgaatgt 350
gggcctccac caccaccacc ccccccgcca caccctcac cacctccacc 400
accaccacca cccccacgcg caccatcccc gccacgtcgt ctgagggtgc 450
tgtcgccggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctggggg 550
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgtgtgaag gtttggggag tggagagcaa ggtgtgctctt tcggggcttg 700
 acagcccgctc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctctcatca ggtgtgtgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtcttttgg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggctgct gagctgcctt gaggtgcagt gttggggatc cagagccatg 50
 tcggacctgc tactactggg cctgattggg ggccctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggccatacaag 200
 ttccacatgg ggccttatgg tgagaactgg cggtctttta ctgagagctg 250
 cagcatctct cccaagctcc gtcccatcgc tgtctactat gacaaccccc 300

acatggtgcc cccgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaagggtagg aatcgccctc cccgagctc atcgacctct accagaaatt 400
 tgggttcaag gtgtttctct tccgggcacc cagccatgtg gtgacagcca 450
 ccttccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catcctgctt tggacacctc catcaaggag cggaagctgt gtgcctatcc 550
 toggctggag atctaccagg aagaccagat ccatttcatg tgcccactgg 600
 caccggcagg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggogggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccggggagc ttcagctgcc acactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcagggtc 850
 cagcggctcc tcttttgagg agctggactt ggaggcgag ggcccttag 900
 gggagtacg gctggaccct gggactgagc cctgggggac taccaagtgg 950
 ctctgggagc ccactgcccc tgagaaggcg aaggagtaac ccattggcctg 1000
 caccctctcg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctcc ttcctctggg ggaggagggg ttctctgagg 1100
 acctgacttc cctgctcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggctc ccagggccag aggagccagg gactattttt tgcaccagcc 1200
 ccaggggctg ccgccctgt tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt actgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Ser Asp Leu Leu Leu Gly Leu Ile Gly Gly Leu Thr Leu
 1 5 10 15
 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
 ccgcggaac gctgtcctgg ctgccgccac ccgaacagcc tgtcctgggtg 50
 ccccggtgcc ctgccccgcg ccagtcctatg acctgcgcc cctcactcct 100
 ccgctccat ctgctgctgc tgcgtgctgct cagtgcggcg gtgtgcggg 150
 ctgaggctgg gctcgaaacc gaaagtcccg tccggaccct ccaagtgag 200
 acctggtgg agccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cggaagctt ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaagggca atcattcctt ctacttggc ctatggaaaa cggggatttc 450
 caccatctgt cccagcggat gcagtgtgtc agtatgacgt ggagctgatt 500
 gcaactaatc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

<400> 100
cccgggaacg tgttctggc tgccgcaccc gaacagcctg tcttggtgcc 50
cgggtccct gcccgcgcc cagtcacgac cctgcgccc tcaactctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgcggggt 150
gaggctgggc tcgaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaa catgtgccga gcccgctgct ttggagaca 250
cgctccacat aactacacg ggaagcttgg tagatggagc tattattgac 300
acctccctga ccagagaccc tctggttata gaacttgccc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctoga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct caactggcct atggaaaagc gggatttcca 450
ccatctgtcc cagcggatgc agtggtgcag tatgacgttg agctgattgc 500
actaatccga gccaaactact ggctaaaagct ggtgaagggc attttgcctc 550
tggtagggat ggccatggtg ccacctctct gggcctcatt gggatcacc 600
tatcacagaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccc 50
gaacctatgt ccgagccgc tgcttttga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
acctctggtg tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcaactg gcctatggaa aacggggatt tcaccatct gtccagcgg 300
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctctctgggc tcatctgggt tcaacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaacg 500
 agcaaaaaga aataataaat aataaatctt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
 ctgctgcacg cgggtgtctg gaggtgtggt cggttttgtt ttcttggtta 50
 aaatcggggg agtgaggcgg gccggcgagg cgcgacaccg ggctccggaa 100
 ccactgcacg acgggggttg actgacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tgggggggaa agcgaataac 200
 tattgtcttc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgtttatt tatcccacca tgaagaattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatogaat ggacaagtcc gaggtgatag ttacagttaa ggttgctctg 400
 gtcaaacagg tgctgcgatt tggcttttgc ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcct tttggaggtt atgtgtctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagtgaa cacatctgat ttcccacagc acaacagccc tgcatggggtt 650
 tgtttgtttt tttactgctc actccaacc ttttgtaatg ccattttcta 700
 aacttatttc tgagtgtagt ctacgtttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaaaacaac accaaaaatc tattgtggtta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata tctgaggtcc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtgggtcaaaa ttcttctctc ctataatttg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcctttg aggggtctcc aagggtgtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctcg 1200
 tgtcccttcc atgggaaggt ctcccgctgt gcctctcatt ccaagggcag 1250
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tccacatcca ccaactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp
1 5 10 15

Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150

Arg Thr Glu Asp Leu Trp Gln
155

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggcta aaatcggggg agtgaggcgg gccgcgcgg cgcgacacgg 50

ggctccggaa ccaactgcacg acggggcttg actgacctga aaaaaatgtc 100

tggatttcta gagggttga gatgctcaga atgcattgac tgggggggaaa 150

agcgaatac tattgtcttc attgtctgtg gtgtactatt ttttacaggc 200

tgggtggatta toatagatgc agctgttatt tatccacca tgaaagattt 250

caaccactca taccatgcct gtggtgttat agcaaccata gccttctcaa 300

tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350

ggttgtctgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattctt tttggagggtt 450
atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
<211> 490
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 31, 39, 108, 145, 179, 219, 412, 479
<223> unknown base

<400> 105
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tggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150
tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
ccgaggtgat agttacagtg aaggttggtt gggcaaaca ggtgctcgca 300
tttggctttt cgttgggttc atgttggcct ttgcatctct gattgcatct 350
atgtggatto tttttggagg ttatgttgct aaagaaaaag acatagtata 400
ccttgaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
<211> 466
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 26, 38, 81, 115, 207, 329, 380, 446, 449
<223> unknown base

<400> 106
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acagggtggt ggattatcat agatgcagct gttatttato ccaccatgaa 200
agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
tcctaagatg taatgcagta tcgaatggac aagtcaggag tgatagttac 300
agtgaaggtt gtttgggtca aacagggtnt cgcatttggc ttttcgttgg 350
tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattncnt 450

atttttocag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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antattgctt ccattgntgn tgggtgnta tttttttaca ggctggtgga 100

ttatnataga tgcagctggtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggtgttt 250

tgggtcaaac aggtgntngc atttggcttt tngttggttt catgttggtc 300

tttggatctn tgattgcatt tatgtggatt ntttttgag gttatgttgc 350

taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggactgacct gaaaaaaatg tttggatttn tagagggctt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgtgtc 200

tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250

tttatccac catgaaagat ttoaaccact cataccatgc ctgtggtgtt 300

atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 350

cggaggtgat agttacagtg aaggttgtct ggggtcaaca ggtgctcgca 400

tttggtcttt cgttggtttc atgttgccct ttgatntct gattgcatct 450

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ccctggaatt gctgtatttt tcagaatgc cttcatnttt ttggaggggc 550

tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 110
tgtgtgtctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
gtgtctggag gctgtggccg tttgttttc ttgggctaaa atcggg 46

<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccttggtaac 150
tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200
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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile
				425					430					435
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp
				440					445					450
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro
				455					460					465
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly
				470					475					480
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu
				485					490					495
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly
				500					505					510
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe
				515					520					525
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp
				530					535					540
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln
				545					550					555
Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr
				560					565					570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser
				575					580					585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp
				590					595					600
Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn					
				605					610					

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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 gatagggtcg acgctgctgc tgtgtcgggt gctgctgagc ttggcctcgg 150
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 agttgtcgtt caaatatttc ttgattcaga agaattcgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaagggg ggaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaccagc ttgaccgcc attgaaggca 450

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

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 acgctcagcc cccagcacgt caccatcagg gactacgggtg tgtcctggta 250
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 aaaatggggtt aataatatc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
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 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
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 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
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 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
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 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Gly
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 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
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Arg Thr Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn
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Arg Ser Asp Val Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu
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Ala	Ala	Ile	Tyr	Leu	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Leu	Thr	Gln
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Thr	Asp	Ser	Asp	Gly	Arg	Phe	Arg	Ile	Pro	Gly	Leu	Cys	Pro	Asp
				260					265					270
Gly	Lys	Ser	Ile	Leu	Lys	Ile	Thr	Lys	Val	Lys	Phe	Ala	Pro	Ile
				275					280					285
Val	Leu	Thr	Met	Pro	Lys	Thr	Ser	Leu	Lys	Ala	Ala	Thr	Ile	Lys
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Ala	Glu	Phe	Val	Arg	Ala	Glu	Thr	Pro	Tyr	Met	Val	Met	Asn	Pro
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Glu	Thr	Lys	Ala	Arg	Arg	Ala	Gly	Gln	Ser	Val	Ser	Leu	Cys	Cys
				320					325					330
Lys	Ala	Thr	Gly	Lys	Pro	Arg	Pro	Asp	Lys	Tyr	Phe	Trp	Tyr	His
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Asn	Asp	Thr	Leu	Leu	Asp	Pro	Ser	Leu	Tyr	Lys	His	Glu	Ser	Lys
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Cys	Lys	Ala	Gln	Ser	Asp	Ala	Gly	Ala	Val	Lys	Ser	Lys	Val	Ala
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Pro	Glu	Ser	Tyr	Leu	Ile	Arg	Leu	Pro	His	Asp	Cys	Phe	Gln	Asn
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Thr	Cys	Ala	Gly	Gln	Gln	Asp	Asn	Gly	Ile	Arg	Cys	Arg	Asp	Ala
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Val	Gln	Asn	Cys	Cys	Gly	Ile	Ser	Lys	Thr	Glu	Glu	Arg	Glu	Ile
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Ser	Cys	Gln	Arg	Cys	Thr	Glu	Thr	Arg	Ser	Ile	Val	Arg	Gly	Arg
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Val	Ser	Ala	Ala	Asp	Asn	Gly	Glu	Pro	Met	Arg	Phe	Gly	His	Val
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Tyr	Met	Gly	Asn	Ser	Arg	Val	Ser	Met	Thr	Gly	Tyr	Lys	Gly	Thr
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Phe	Val	Asp	Arg	Leu	Gln	Lys	Phe	Val	Asn	Thr	Thr	Lys	Val	Leu
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Pro	Phe	Asn	Lys	Lys	Gly	Ser	Ala	Val	Phe	His	Glu	Ile	Lys	Met
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Ile	Ile	Pro	Leu	Gly	Glu	Val	Val	Gly	Glu	Asp	Pro	Met	Ala	Glu
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Leu	Glu	Ile	Pro	Ser	Arg	Ser	Phe	Tyr	Arg	Gln	Asn	Gly	Glu	Pro
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Tyr	Ile	Gly	Lys	Val	Lys	Ala	Ser	Val	Thr	Phe	Leu	Asp	Pro	Arg
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Asn	Asp	Glu	Gly	Asp	Thr	Phe	Pro	Leu	Arg	Thr	Tyr	Gly	Met	Phe
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Ser	Val	Asp	Phe	Arg	Asp	Glu	Val	Thr	Ser	Glu	Pro	Leu	Asn	Ala
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Gly	Lys	Val	Lys	Val	His	Leu	Asp	Ser	Thr	Gln	Val	Lys	Met	Pro
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Glu	His	Ile	Ser	Thr	Val	Lys	Leu	Trp	Ser	Leu	Asn	Pro	Asp	Thr
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Gly	Leu	Trp	Glu	Glu	Glu	Gly	Asp	Phe	Lys	Phe	Glu	Asn	Gln	Arg
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Arg	Asn	Lys	Arg	Glu	Asp	Arg	Thr	Phe	Leu	Val	Gly	Asn	Leu	Glu
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Ile	Arg	Glu	Arg	Arg	Leu	Phe	Asn	Leu	Asp	Val	Pro	Glu	Ser	Arg
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Pro	Ser	Glu	Gln	Ile	Gln	Gly	Val	Val	Ile	Ser	Val	Ile	Asn	Leu
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Phe	Cys	Asp	Asp	Gln	Ser	Pro	Asp	Ala	Tyr	Ser	Ala	Tyr	Val	Leu
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 Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr
 50 55 60
 Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro
 65 70 75
 Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn
 80 85 90
 Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu
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 Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser
 110 115 120
 Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

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Leu Ser Trp Ser Lys Thr Ile Glu Leu Thr Asp Asn Ile Val Ile	140		145		150
Thr Phe Glu Ser Gly Arg Pro Asp Gln Met Ile Leu Glu Lys Ser	155		160		165
Leu Asp Tyr Gly Arg Thr Trp Gln Pro Tyr Gln Tyr Tyr Ala Thr	170		175		180
Asp Cys Leu Asp Ala Phe His Met Asp Pro Lys Ser Val Lys Asp	185		190		195
Leu Ser Gln His Thr Val Leu Glu Ile Ile Cys Thr Glu Glu Tyr	200		205		210
Ser Thr Gly Tyr Thr Thr Asn Ser Lys Ile Ile His Phe Glu Ile	215		220		225
Lys Asp Arg Phe Ala Leu Phe Ala Gly Pro Arg Leu Arg Asn Met	230		235		240
Ala Ser Leu Tyr Gly Gln Leu Asp Thr Thr Lys Lys Leu Arg Asp	245		250		255
Phe Phe Thr Val Thr Asp Leu Arg Ile Arg Leu Leu Arg Pro Ala	260		265		270
Val Gly Glu Ile Phe Val Asp Glu Leu His Leu Ala Arg Tyr Phe	275		280		285
Tyr Ala Ile Ser Asp Ile Lys Val Arg Gly Arg Cys Lys Cys Asn	290		295		300
Leu His Ala Thr Val Cys Val Tyr Asp Asn Ser Lys Leu Thr Cys	305		310		315
Glu Cys Glu His Asn Thr Thr Gly Pro Asp Cys Gly Lys Cys Lys	320		325		330
Lys Asn Tyr Gln Gly Arg Pro Trp Ser Pro Gly Ser Tyr Leu Pro	335		340		345
Ile Pro Lys Gly Thr Ala Asn Thr Cys Ile Pro Ser Ile Ser Ser	350		355		360
Ile Gly Thr Asn Val Cys Asp Asn Glu Leu Leu His Cys Gln Asn	365		370		375
Gly Gly Thr Cys His Asn Asn Val Arg Cys Leu Cys Pro Ala Ala	380		385		390
Tyr Thr Gly Ile Leu Cys Glu Lys Leu Arg Cys Glu Glu Ala Gly	395		400		405
Ser Cys Gly Ser Asp Ser Gly Gln Gly Ala Pro Pro His Gly Thr	410		415		420
Pro Ala Leu Leu Leu Leu Thr Thr Leu Leu Gly Thr Ala Ser Pro	425		430		435
Leu Val Phe					

<210> 130
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 130
 tcgattatgg acgaacatgg cagc 24

 <210> 131
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 131
 ttctgagatc cctcatcctc 20

 <210> 132
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 132
 aggttcaggg acagcaagtt tggg 24

 <210> 133
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 133
 ttgtctggac ctccggctacg gaattggctt ccctctacgg acagctggat 50

 <210> 134
 <211> 1493
 <212> DNA
 <213> Homo sapiens

 <400> 134
 ccacacgctc cgggtgacct gggcgcgagcc ctcccggtcg gctaagattg 50
 ctgaggaggc ggcgggtagc tggcaggcgc cgacttcgga aggcgcgcgt 100
 ccggcgcagg tgctctcatg acttctcttg tggaccatgt ccgtgatctt 150
 ttttgcctgc gtggtacggg taaggatggt actgccccctc tcagcctcta 200
 ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
 agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300

Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile
 50 55 60
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser
 65 70 75
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu
 80 85 90
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu
 95 100 105
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln
 110 115 120
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu
 125 130 135
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro
 140 145 150
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met
 155 160 165
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg
 170 175 180
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn
 185 190 195
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala
 200 205 210
 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp
 215 220 225
 Gln Thr Ser

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgg agacctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc ntgcctcca gccatacgc ttttcttgag ttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgctcc 150
ggacgactgt atctgagccc cagactgccc cgagttctgt tcgcaggctg 200
cgaggaaagg cccttaggct gggctctgggt gcttggcggc ggcggtctcc 250
tccccgctcg tctccccgg gccagaggc acctcggtt cagtcatgct 300
gagcagagta tggaaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgacccgctt caagaagcct 450
gtgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gtctgagctg tgcaccttta ccttggaat tgccctgggt gctgtcctgc 550
tcttgccctt ctccatcatc agcaatgagg tgctgtctc cctgctctgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
cctgtttttt ctcttcccca acctgtccct catcttccct atgccctttg 700
catattttct cactgagtct gagggtttg ctggtccag aaagggtgtc 750
ctgggcgggg tctatgagac agtgggtgat ttgatgtccc tcaactgtgt 800
gggtgctagg atgggtgtgg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcaactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttct tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgt ggaagacctg gaggagcagc tgtactgtcc agcctttgag 1050
gaggcagccc tgaccgcag gatctgtaat cctacttctt gctggctgcc 1100
tttagacatg gagctgtctac acagacaggt cctggtctctg cagacacaga 1150
gggtcctgt ggagaagagg cgggaaggct cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttctg gtgctgacgg gcctgtctgt 1250
gtcatttgt gccatccaca tcttgaggct gctcatcgat gaggtgccoa 1300
tgccccgagg catgcagggt acctccttag gccaggtctc cttctccaag 1350
ctgggtcctt ttggtgccgt cattcaggtt gtactcatct tttaacctaat 1400
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ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tctaagctc agcacttccg gtcttctctc gaaccttggg 1550
 gctcactcgc tttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
 gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
 acactctgtc tgggaagac cttcactgca gctgtgcggg cagagctgat 1700
 ccgggccttt gggctggaca gactgcgcgt gcccgctctc ggtttccccc 1750
 aggcactag gaagaccag caccagtgc ctccagctgg ggggtgggaag 1800
 gaaaaaactg gacactgcc tctgctgcct aggcctggag ggaagcccaa 1850
 ggctacttgg acctcaggac ctggaatctg agaggggtggg tggcagaggg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaag aggactgggc cagggcaggc 2150
 tcgggagata gattgtctcc cttgcctctg gccacgaga gcctaagcac 2200
 tgtgtatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
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Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
			20						25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
			35					40						45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
			50					55						60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
			65					70						75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
			80					85						90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
			95					100						105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
			110					115						120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

	125		130		135
Glu Ser Glu Gly Phe	Ala Gly Ser Arg	Lys Gly Val Leu Gly	Arg		
	140		145		150
Val Tyr Glu Thr Val	Val Met Leu Met	Leu Leu Thr Leu Leu	Val		
	155		160		165
Leu Gly Met Val Trp	Val Ala Ser Ala	Ile Val Asp Lys Asn	Lys		
	170		175		180
Ala Asn Arg Glu Ser	Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu	Pro		
	185		190		195
Tyr Leu Tyr Ser Cys	Ile Ser Phe Leu	Gly Val Leu Leu Leu	Leu		
	200		205		210
Val Cys Thr Pro Leu	Gly Leu Ala Arg	Met Phe Ser Val Thr	Gly		
	215		220		225
Lys Leu Leu Val Lys	Pro Arg Leu Leu	Glu Asp Leu Glu Glu	Gln		
	230		235		240
Leu Tyr Cys Ser Ala	Phe Glu Glu Ala	Ala Leu Thr Arg Arg	Ile		
	245		250		255
Cys Asn Pro Thr Ser	Cys Trp Leu Pro	Leu Asp Met Glu Leu	Leu		
	260		265		270
His Arg Gln Val Leu	Ala Leu Gln Thr	Gln Arg Val Leu Leu	Glu		
	275		280		285
Lys Arg Arg Lys Ala	Ser Ala Trp Gln	Arg Asn Leu Gly Tyr	Pro		
	290		295		300
Leu Ala Met Leu Cys	Leu Leu Val Leu	Thr Gly Leu Ser Val	Leu		
	305		310		315
Ile Val Ala Ile His	Ile Leu Glu Leu	Leu Ile Asp Glu Ala	Ala		
	320		325		330
Met Pro Arg Gly Met	Gln Gly Thr Ser	Leu Gly Gln Val Ser	Phe		
	335		340		345
Ser Lys Leu Gly Ser	Phe Gly Ala Val	Ile Gln Val Val Leu	Ile		
	350		355		360
Phe Tyr Leu Met Val	Ser Ser Val Val	Gly Phe Tyr Ser Ser	Pro		
	365		370		375
Leu Phe Arg Ser Leu	Arg Pro Arg Trp	His Asp Thr Ala Met	Thr		
	380		385		390
Gln Ile Ile Gly Asn	Cys Val Cys Leu	Leu Val Leu Ser Ser	Ala		
	395		400		405
Leu Pro Val Phe Ser	Arg Thr Leu Gly	Leu Thr Arg Phe Asp	Leu		
	410		415		420
Leu Gly Asp Phe Gly	Arg Phe Asn Trp	Leu Gly Asn Phe Tyr	Ile		
	425		430		435
Val Phe Leu Tyr Asn	Ala Ala Phe Ala	Gly Leu Thr Thr Leu	Cys		

tttaccctgg caattgccct ggggtgctgc ctgctctgc ccttctccat 500
catcagcaat gaggtgctgc actccc 526

<210> 141
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 141
gactgtatct gagccccaga ctgc 24

<210> 142
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 142
tcagcaatga ggtgctgctc 20

<210> 143
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 143
tgaggaagat gagggacagg ttgg 24

<210> 144
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 144
tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
<211> 685
<212> DNA
<213> Homo sapiens

<400> 145
gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50
caaacctgtt ttggaattga gaaaacttct cttttgatct cagcccttgg 100
tgggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150
gtcagtgagc agtttgcaag gacacccagg cccattattt tccctcagcc 200
tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacett 300
 gggaaagaaa tactaagaga aaccccagac aatataccttg aggttcagga 350
 atctggagag tacagatgcc aggccaggg ctccccctctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttctctatgc tgcccaggt 450
 aatgttgaac tcttgggctc aagtgatctg ctcacatagg cctctcaaag 500
 cgctgggatt acagcttgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtgttctg aggtgccggg caaaggcggg agtaaacctg 600
 aataatacta tttaacaaga tgataatgct ctggcattcc ttaataaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagagg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 cccccccggt gtgaggcggc ctcacagggc cgggtggggt ggcgagccga 100
 cgcgcgggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgcgggacga gatttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaatttcc aggatctggg tgetgcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttcttttg ggattttggt 500
 ttcatgtttg gaggaacccc tctgcagcaa gacagaaata ttccaaggag 550
 aagtgtatatt attgtagatc tagaagtcac ttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca ccagctggg 700
 ccctgggcgc ttccaaatga ccagaggagt ggtctgcgac gaatgcccta 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
 cgtggatggg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaagggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcaactgt tggctttgag atggatatta ctoacttgga 1000
 tggtcacaag gtacatatct cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatc 1100
 aagggtcctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttgatgtg gttttgttt ttattttcaa tatgcaagtt aggcctaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400
 coatttgcat tcggaaaaga atgaccagca aaagggttac taatacctct 1450
 ccctttgggg atttaattgt tgggtgctgcc gctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gagggtttga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgtttttttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr	
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Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu	
				20					25					30	
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	
				35					40					45	
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	
				50					55					60	
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	
				65					70					75	
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	
				80					85					90	
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	
				95					100					105	
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	
				110					115					120	
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile	
				125					130					135	
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe	
				140					145					150	
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	
				155					160					165	
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	
				170					175					180	
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	
				185					190					195	
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	
				200					205					210	
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	
				215					220					225	
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg	
				230					235					240	
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	
				245					250					255	
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu	
				260					265					270	
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val	
				275					280					285	
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	
				290					295					300	

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
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 gntgcgaccg aagcggcggg cggaggaggt tttgaggatt ttggaacag 100
 gacccggaac gaggaaccat ggttccgcag aacntgagca cnttttgctt 150
 gttgntgnta tacttcacg gggcggtgat tgcgggagca gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaagatat taaaagggcc 250
 tataggaac tagccctgca gnittatccc gaccggaacc ctgatgatcc 300
 acaagcccg gagaaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatgtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
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 aggcctctag gtctctgcag gtgtcgtgga ggaacctag acctgccatc 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gactcaggag ccctctggaa gcattggagc tgtggtgatt 200
 gttgccatag gtgtgctggc caccatcttt ctggtcttgt ttgacgcctt 250
 ggtgctgtgt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgatto taagccatt gtggacctoa ttggtgccat ggagaccag 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
 cattgaggcc attctggaga atgaagactg gatogaagat gcctcgggtc 450
 tcatgtccca ctgcattgcc atcttgaaga ttgtcacac tctgacagag 500
 aagctgttg ccatgacaat gggctctggg gccaaagatga agacttcagc 550
 cagtgtcagc gacatcattg tgggtggcaa gcgacacgc cccaggggtg 600
 atgatgttg gaagtogatg taccctccgt tggaccccaa actcctggac 650
 gcacggagca ctgccctgct cctgtctgtc agtcacctgg tgctgggtgac 700
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtcct 750
 tctcggctgc tgaggagcat ttggaagtc ttogagaagc agccctagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gtctgcaatt tagtgcctac aggccagcag ctagccatga aggccctgc 900
 cgccatccct ggtaggctca gcttagcctt ctactttttc ctatagagtt 950
 agttgttctc cacggctgga gaggtcagct gtgtgtgat agtaaagcag 1000
 gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtgctggt 1050
 gaggggcagt ctaatactac agttagggga gatgccattc actctctgca 1100
 agaggagtat tgaaaactgg tggactgtca gctttattta gtcacactag 1150
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
 taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtagggggt 1300
 tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
 tgtattatct gctgggtccc tgaggcgtct gggctctctc tctccctgac 1400
 aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
 tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaat 1500
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151
 <211> 226
 <212> PRT
 <213> Homo sapiens

<400> 151
 Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
 1 5 10 15
 Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
 20 25 30
 Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35		40		45
Ile Val Asp Leu	Ile Gly Ala Met Glu	Thr Gln Ser Glu Pro Ser			
	50	55			60
Glu Leu Glu Leu Asp	Asp Val Val Ile	Thr Asn Pro His Ile Glu			
	65	70			75
Ala Ile Leu Glu Asn	Glu Asp Trp Ile	Glu Asp Ala Ser Gly Leu			
	80	85			90
Met Ser His Cys Ile	Ala Ile Leu Lys	Ile Cys His Thr Leu Thr			
	95	100			105
Glu Lys Leu Val Ala	Met Thr Met Gly	Ser Gly Ala Lys Met Lys			
	110	115			120
Thr Ser Ala Ser Val	Ser Asp Ile Ile	Val Val Ala Lys Arg Ile			
	125	130			135
Ser Pro Arg Val Asp	Asp Val Val Lys	Ser Met Tyr Pro Pro Leu			
	140	145			150
Asp Pro Lys Leu Leu	Asp Ala Arg Thr	Thr Ala Leu Leu Leu Ser			
	155	160			165
Val Ser His Leu Val	Leu Val Thr Arg	Asn Ala Cys His Leu Thr			
	170	175			180
Gly Gly Leu Asp Trp	Ile Asp Gln Ser	Leu Ser Ala Ala Glu Glu			
	185	190			195
His Leu Glu Val Leu	Arg Glu Ala Ala	Leu Ala Ser Glu Pro Asp			
	200	205			210
Lys Gly Leu Pro Gly	Pro Glu Gly Phe	Leu Gln Glu Gln Ser Ala			
	215	220			225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctatttga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300

attttagtgc cttattggtt ggcccttgat aggcattgac ttcgaaattt 350
 atggattttt tctcttggtc aggggcttct ttctgtcgtg tgttggtttt 400
 attagaagag tgccagtcct tggatccctc ctaaaattac ctggaattag 450
 atcatttgta gataaagttg gagaagcaa caatatgta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattttca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggaggtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaaact gagagagggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
 tttagaagct gtggtgcctg tttcttttct tttatttttg aaggtctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgatttga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaaccccaat ttgatgtat 1000
 ggattacttt ttttngncc cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
 1 5 10 15
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln	Lys	His	Lys	Met	Lys	Ala	Thr	Gly	Phe	Phe	Leu	Gly	Gly	Val
				65					70					75
Phe	Val	Val	Leu	Ile	Gly	Trp	Pro	Leu	Ile	Gly	Met	Ile	Phe	Glu
				80					85					90
Ile	Tyr	Gly	Phe	Phe	Leu	Leu	Phe	Arg	Gly	Phe	Phe	Pro	Val	Val
				95					100					105
Val	Gly	Phe	Ile	Arg	Arg	Val	Pro	Val	Leu	Gly	Ser	Leu	Leu	Asn
				110					115					120
Leu	Pro	Gly	Ile	Arg	Ser	Phe	Val	Asp	Lys	Val	Gly	Glu	Ser	Asn
				125					130					135

Asn Met Val

<210> 154
 <211> 405
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 66
 <223> unknown base

<400> 154
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 actcagcttc ccacntggg ctttcgagg tgccttcgcc gctgtccca 100
 ccactgcagc catgatctcc ttaacggaca cgcagaaaaa tggaatggga 150
 ttaaccggat ttggagtgtt ttctctgttc ttggaatga ttctcttttt 200
 tgacaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
 cttttgtaat tggttttagaa agaacattca gattctcttt ccaaaaaaat 300
 aaaatgaaag ctacaggttt tttctgggt ggtgtatttg tagtccttat 350
 tgggtggcct ttgataggca tgatcttcga aatttatgga tttttctct 400
 tgttc 405

<210> 155
 <211> 1781
 <212> DNA
 <213> Homo sapiens

<400> 155
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 ccatgtgcc aaggctgcc ggaaggagac gccttcctga gtccctggatc 100
 tttctctctt ctggaatct ttgactgtgg gtagttattt atttctgaat 150
 aagagcgtcc acgcatcatg gacctcggg gactgctgaa gtctcagttc 200
 ctgtgccacc tggctctctg ctacgtcttt attgcctcag ggctaatacat 250

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	
1				5					10					15	
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	
				20					25					30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	
				35					40					45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	
				50					55					60	
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	
				65					70					75	
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	
				80					85					90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	
				95					100					105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	
				110					115					120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	
				125					130					135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	
				140					145					150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	
				155					160					165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	
				170					175					180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	
				185					190					195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	
				200					205					210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	
				215					220					225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	
				230					235					240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	
				245					250					255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	
				260					265					270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	
				275					280					285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val	

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val Asn Trp Leu Phe Trp Ala		
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln Phe Leu Val Ser Met Ile		
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala Ser Phe Ile Leu Val Phe		
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp Met Ile Gly Val Thr Glu		
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn Ser Asp Ser Lys Gln Lys		
365	370	375
Leu Asn Asp		

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
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 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300
 tgtggtaggt tggtaaaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acagggtacc tttagtgggt gccaatctgg gcattgtctga acaactgggt 550
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 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaattga gaaaaggaga ggagcacaga 800
 ttccaggcagc aagagagaag aacatccaaa aagacctcga ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaatctcg aatttcttca 900
 ttcattgtgt atgtctttaa aaaatagaca tgtttctaaa agtagctgta 950

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 cgccgccccac accctctgcg gtcccccgcg cgctgccac cttccctcc 150
 ttcccccgct ccccgctcg ccggccagtc agcttgccgg gttcgctgcc 200
 ccgcgaaacc ccgaggtcac cagcccgcg ctcgtctcc ctgggcccgg 250
 cgccgcctcc acgcccctct tctcccctgg cccggcgctt ggcacccggg 300
 accgttgctt gacgcgagga ccagctctac ttttcgccc gcgctctctc 350
 cgctgctcg cctcttcac caactccaac tccttctccc tcagctcca 400
 ctcgctagtc ccgactccg ccagccctcg gccgctgcc gttagccgcg 450
 ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcaccat 500
 ggcacgggtc ggcttgccc cgcttctctg caccctggca gtgctcagcg 550
 ccgcgctgct ggctgccgag ctcaagtcca aaagttgctc ggaagtgcga 600
 cgctctttacg tgtccaaagg cttcaacaag aacgatgccc cctccacga 650
 gatcaacggt gatcattga agatctgtcc ccagggttct acctgctgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaga tgatttcaa 750
 agtgtgtgta gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
 ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
 aatccctgaa tgatatgtt gtgaagacat atggccattt atacatgcaa 900
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 gtctccgtgg taaacccac agcccaggtg acccatgccc tgttgaagat 1250
 gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
 actactgctc aaacatcatg agaggctggt tggccaacca aggggatctc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggg cctttcaaca ttgaatcggt catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaaggttt tccagggatg tggacccccc aagccccctcc cagctggacg 1550
 aatttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccgga ggaacgcca accacagcag ctggcactag tttggaccga 1650
 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700
 ctcccttcg agcaacgttt gcaacgatga gaggatggct gcaggaaaacg 1750
 gcaatgagga tgactgttgg aatgggaaag gcaaaagcag gtacctgttt 1800
 gcagtgcacg gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttccagtgtat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
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 ggggcacag cctacctcct cactgtcttc tgcattctgt tctgtgttat 2150
 gcagagagag tggagataat tctcaaaact tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
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 tttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggttc ctgctccccc aaacctgttt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgatg tttttttctc atttcgtttg tgggtttttt 2500
 tttccaactg tgatctcgcc ttgtttctta caagcaaacc aggggtccctt 2550
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 agcagggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650
 c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met Ala Arg Phe Gly Leu Pro Ala Leu Leu Cys Thr Leu Ala Val
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Leu Ser Ala Ala Leu Leu Ala Ala Glu Leu Lys Ser Lys Ser Cys
 20 25 30

Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

350	355	360
Phe Ser Ala Arg Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr	
365	370	375
Thr Ala Ala Gly Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys	
380	385	390
Glu Lys Leu Lys Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser	
395	400	405
Asn Val Cys Asn Asp Glu Arg Met Ala	Gly Asn Gly Asn Glu	
410	415	420
Asp Asp Cys Trp Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala	
425	430	435
Val Thr Gly Asn Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val	
440	445	450
Gln Val Asp Thr Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile	
455	460	465
Met Ala Leu Arg Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn	
470	475	480
Gly Asn Asp Val Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly	
485	490	495
Glu Gly Ser Gly Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu	
500	505	510
Phe Asp Tyr Asn Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu	
515	520	525
Lys Ala Asp Ser Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu	
530	535	540
Leu Thr Val Phe Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp	
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 161
 ctccgtggta aaccccacag ccc 23

<210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggctctcgta ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
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gctgagtatc ctgacctgag tcatccccag ggcacaggag cctccagcag 100
ggaaccttcc attatatctc tcaagcaact tacagctgca cgcacagttg 150
cgatgaaagt tctaatctct tccctcctcc tgttgctgcc actaatgctg 200
atgtccatg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcga agattggttc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcccc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgccact cttocaatta aacatttcta 550
gccaaagaag cagtgcacac acctaccaga cactcttctt ctcccacttc 600
actctcccac tgtaccaccc cctaaatcat tccagtgtgc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt ctctctctct 700
cgtcagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaagatt ccaggaaact gttagcttct agctagtgtc atttaacctt 800
aaatgcaatc aggaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
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 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
 tccaagagca gccaaatcct gcttttccag tttggtcca caagtctctc 350
 aggacagagc cctcaaagca actccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaa ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys	Asp Pro Lys Pro Asp Phe			
	35	40			45
Pro Lys Phe Leu	Ser Leu Leu Gly Thr	Glu Ile Ile Glu Asn Ala			
	50	55			60
Val Glu Phe Ile	Leu Arg Ser Met Ser	Arg Ser Thr Gly Phe Met			
	65	70			75
Glu Phe Asp Asp	Asn Glu Gly Lys His	Ser Ser Lys			
	80	85			

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
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 ggaagcacag ctccagagctg gtctgccatg gacatcctgg tccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 ctccagccag ataaaggggc ttacagagag ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagttcta ccacccgggc 350
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcaacctca atatgagcgg ttgtggttg 450
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 gtctgcactc tgggtgctgt ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccaact ggaaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg ccagttctc cgaatccaa atggaacgac 750
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 gacagtga aaagctctact tctacgctga ccagggagg aaacactagg 1050
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gcctccaat gttgtccctt tccttcgttc ccatggtaaa gtcctctcgc 1150
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 tcatgggtgc tgcatccctg ccaagccccc ctgaccctct cccccacta 1250
 ccacattctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
 atgccagagc aagactcaaa gaggcagagg tttgttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 169
 Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu 15
 1 5 10 15
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro 30
 20 25 30
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro 45
 35 40 45
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser 60
 50 55 60
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu 75
 65 70 75
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro 90
 80 85 90
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys 105
 95 100 105
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu 120
 110 115 120
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp 135
 125 130 135
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val 150
 140 145 150
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg 165
 155 160 165
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr 180
 170 175 180
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp 195
 185 190 195
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys 210
 200 205 210
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln 225
 215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
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 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctctctttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
 aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtgtgta tgcgtgcac tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagaca acaactcgct caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
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 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaatto tggttcccag cgcaaagaag 650
 gccatataca tggatgatga tgtaattgtg caaggtgata ttcttgccct 700
 ttacaataca goactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
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 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaaac 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaaatgggatg 950
 aaactcaatg tagaagaggg actgtatagc agaacccttg ctggtagcat 1000
 cacaacacct cctctgctta tcgtatttta tcaacgacac tctaccatcg 1050
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aatgactgga aagaagaact gatattggcta gttcagctag ctggtacaga 1550
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taaataaaac ttacattttt c 1621

<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val
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Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser
				20					25					30
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro
				35					40					45
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp
				50					55					60
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp
				65					70					75
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn
				80					85					90
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr
				95					100					105
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser
				110					115					120
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly
				125					130					135
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu
				140					145					150
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys
				155					160					165
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile
				170					175					180
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala

aagtaaagga ggatcctgac cagggggaat ccatgaaacc ttaaccttt 400
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catggatgat gatgtaattg tgcaagggtga tattcttgcc ctttacaata 500
cagcaactgaa gccaggacat gcagctgcat ttccagaaga ttgtgattca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173
<211> 1866
<212> DNA
<213> Homo sapiens

<400> 173
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aacgcggggcg gccagacaac gggctgggct ccggggcgctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcgg gctgcatcgg catctcctcc 200
atcgccctgca gtaagggcgg ccgcgcgcag cctttgaggg gaacgacttg 250
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tcacatcact ttccgatcac ttcaaagtgg ttaaaaaacta atatattatat 350
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ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
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agaattcgta agctttccat gaaagccagc acttgctcat ttaactcctg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

ccctccct ggtcctccca gtgtttgtg gataataaat ggaactatgg 800
ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175
<211> 87
<212> PRT
<213> Homo sapiens

<400> 175
Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys
1 5 10 15
Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Trp Val Ile Leu
20 25 30
Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45
Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
50 55 60
His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
65 70 75
Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
80 85

<210> 176
<211> 1660
<212> DNA
<213> Homo sapiens

<400> 176
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cccaggctac cagttcctcc aagcaagtca ttcccttat ttaaccgatg 100
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atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200
gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250
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 ctgctttgga gacttcataa tttttctagg aaagggtgta gtggtgtgtt 1200
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 ggaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaaa ttagtgaatt ttttttttaa agaccttaata aaccctattc 1650
 ttctcaaaa 1660

<210> 177
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Ser Gly Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu
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 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr
 20 25 30
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu
 35 40 45
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn
 50 55 60
 Asp Leu Ser Ile Glu Leu Asp Thr Glu Arg Glu Asn Met Lys Cys
 65 70 75
 Val Leu Gly Phe Ala Ile Val Ser Thr Gly Ile Thr Ala Val Leu
 80 85 90
 Leu Val Leu Ile Phe Val Leu Arg Lys Arg Ile Lys Leu Thr Val

	95		100		105
Glu Leu Phe Gln Ile Thr Asn Lys Ala Ile Ser Ser Ala Pro Phe	110		115		120
Leu Leu Phe Gln Pro Leu Trp Thr Phe Ala Ile Leu Ile Phe Phe	125		130		135
Trp Val Leu Trp Val Ala Val Leu Leu Ser Leu Gly Thr Ala Gly	140		145		150
Ala Ala Gln Val Met Glu Gly Gly Gln Val Glu Tyr Lys Pro Leu	155		160		165
Ser Gly Ile Arg Tyr Met Trp Ser Tyr His Leu Ile Gly Leu Ile	170		175		180
Trp Thr Ser Glu Phe Ile Leu Ala Cys Gln Gln Met Thr Ile Ala	185		190		195
Gly Ala Val Val Thr Cys Tyr Phe Asn Arg Ser Lys Asn Asp Pro	200		205		210
Pro Asp His Pro Ile Leu Ser Ser Leu Ser Ile Leu Phe Phe Tyr	215		220		225
His Gln Gly Thr Val Val Lys Gly Ser Phe Leu Ile Ser Val Val	230		235		240
Arg Ile Pro Arg Ile Ile Val Met Tyr Met Gln Asn Ala Leu Lys	245		250		255
Glu Gln Gln His Gly Ala Leu Ser Arg Tyr Leu Phe Arg Cys Cys	260		265		270
Tyr Cys Cys Phe Trp Cys Leu Asp Lys Tyr Leu Leu His Leu Asn	275		280		285
Gln Asn Ala Tyr Thr Thr Thr Ala Ile Asn Gly Thr Asp Phe Cys	290		295		300
Thr Ser Ala Lys Asp Ala Phe Lys Ile Leu Ser Lys Asn Ser Ser	305		310		315
His Phe Thr Ser Ile Asn Cys Phe Gly Asp Phe Ile Ile Phe Leu	320		325		330
Gly Lys Val Leu Val Val Cys Phe Thr Val Phe Gly Gly Leu Met	335		340		345
Ala Phe Asn Tyr Asn Arg Ala Phe Gln Val Trp Ala Val Pro Leu	350		355		360
Leu Leu Val Ala Phe Phe Ala Tyr Leu Val Ala His Ser Phe Leu	365		370		375
Ser Val Phe Glu Thr Val Leu Asp Ala Leu Phe Leu Cys Phe Ala	380		385		390
Val Asp Leu Glu Thr Asn Asp Gly Ser Ser Glu Lys Pro Tyr Phe	395		400		405
Met Asp Gln Glu Phe Leu Ser Phe Val Lys Arg Ser Asn Lys Leu					

	410		415		420
Asn Asn Ala Arg Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu					
	425		430		435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg					
	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
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 aagggaaaaa gaattatcat tctgtgtggt gaaaatcttt tgaaaaaaa 150
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 actggagtag attcaacaa agaaacggca aagaagatta aaaggcccaa 300
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 caatcgttat cctaccacg atggagagaa tcctttatcg tcttagaaaag 600
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 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700
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 gcaaacggcg attccgaatc cagaagcagc tctgggtgtg tgttgcccaa 1150
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 agacaacctt gctactcact ttaacctcaa gacacacacg aattctcgag 1250

atctgaagac agccatagag aaaattactc agagaggagg actttctaata 1300
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<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met	1	5	10	15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr	20	25	30	35
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn	40	45	50	55
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val	60	65	70	75
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gln	80	85	90	95
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg	100	105	110	115
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly	120	125	130	135
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val	140	145	150	155
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	160	165	170	175
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	180	185	190	195
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	200	205	210	215
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	220	225	230	235
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	240	245	250	255
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	260	265	270	275
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	280	285	290	295
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	300	305	310	315
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	320	325	330	335
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	340	345	350	355
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly	360	365	370	375

	290		295		300
Ser Thr Ser Ile	Gly 305	Lys Arg Arg Phe	Arg 310	Ile Gln Lys Gln	Leu 315
Leu Ala Asp Val	Ala 320	Gln Ala Leu Asp	Ile 325	Gly Pro Ala Gly	Pro 330
Leu Met Gly Val	Val 335	Gln Tyr Gly Asp	Asn 340	Pro Ala Thr His	Phe 345
Asn Leu Lys Thr	His 350	Thr Asn Ser Arg	Asp 355	Leu Lys Thr Ala	Ile 360
Glu Lys Ile Thr	Gln 365	Arg Gly Gly Leu	Ser 370	Asn Val Gly Arg	Ala 375
Ile Ser Phe Val	Thr 380	Lys Asn Phe Phe	Ser 385	Lys Ala Asn Gly	Asn 390
Arg Ser Gly Ala	Pro 395	Asn Val Val Val	Val 400	Met Val Asp Gly	Trp 405
Pro Thr Asp Lys	Val 410	Glu Glu Ala Ser	Arg 415	Leu Ala Arg Glu	Ser 420
Gly Ile Asn Ile	Phe 425	Phe Ile Thr Ile	Glu 430	Gly Ala Ala Glu	Asn 435
Glu Lys Gln Tyr	Val 440	Val Glu Pro Asn	Phe 445	Ala Asn Lys Ala	Val 450
Cys Arg Thr Asn	Gly 455	Phe Tyr Ser Leu	His 460	Val Gln Ser Trp	Phe 465
Gly Leu His Lys	Thr 470	Leu Gln Pro Leu	Val 475	Lys Arg Val Cys	Asp 480
Thr Asp Arg Leu	Ala 485	Cys Ser Lys Thr	Cys 490	Leu Asn Ser Ala	Asp 495
Ile Gly Phe Val	Ile 500	Asp Gly Ser Ser	Ser 505	Val Gly Thr Gly	Asn 510
Phe Arg Thr Val	Leu 515	Gln Phe Val Thr	Asn 520	Leu Thr Lys Glu	Phe 525
Glu Ile Ser Asp	Thr 530	Asp Thr Arg Ile	Gly 535	Ala Val Gln Tyr	Thr 540
Tyr Glu Gln Arg	Leu 545	Glu Phe Gly Phe	Asp 550	Lys Tyr Ser Ser	Lys 555
Pro Asp Ile Leu	Asn 560	Ala Ile Lys Arg	Val 565	Gly Tyr Trp Ser	Gly 570
Gly Thr Ser Thr	Gly 575	Ala Ala Ile Asn	Phe 580	Ala Leu Glu Gln	Leu 585
Phe Lys Lys Ser	Lys 590	Pro Asn Lys Arg	Lys 595	Leu Met Ile Leu	Ile 600
Thr Asp Gly Arg	Ser Tyr Asp Asp	Val Arg Ile Pro	Ala Met Ala		

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

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 gcgctgtgc ctcagcacca tgggtgcgcca ggtccgcagc gtcgccgcc 150
 agatccgcc cactacagtt ttctctgac tctaattgat gcaactggaca 200
 ccttgctgat ttggggaat gtctcagaat tccaaagagt ggttgaagt 250
 ctocaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgttga 300
 aacaacatt cgagtggtag gaggactcct gtctgtctat ctgctctcca 350
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 ctgagaatgg ctgaggaggc ggcccgaata ctcctcccag cctttcagac 450
 cccactggc atgccatag gaacagtga cttacttcac ggcgagaacc 500
 caggagagac cctgtcacc tgtacggcag ggattgggac cttcattgtt 550
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 tgaaatacct ctacctctg tttgacccaa ccaacttcat ccacaacaat 1300
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 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaacac 1550
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 atcataaaa 1759

<210> 181
 <211> 541
 <212> PRT
 <213> Homo sapiens

<400> 181
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 1 5 10 15
 Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
 20 25 30
 Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
 35 40 45
 Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
 50 55 60
 Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
 65 70 75
 Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
 80 85 90
 Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
 95 100 105
 Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
 110 115 120
 Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met		
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys		
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly		
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys		
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro		
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly Gln Val Phe Leu Asp Ser		
530	535	540
Ser		

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
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 gottcctggg ccggctctag aacaattcag gottcgtgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacccaa 250
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 gtogaataacc agggggagta cgagagcctg tacacgagcc acatctggat 500
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 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5					10					15
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
				20					25					30
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
				35					40					45
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
				50					55					60
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
				65					70					75
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
				80					85					90
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
				95					100					105
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
				110					115					120
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
				125					130					135
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
				140					145					150
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
				155					160					165
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val
				170					175					180
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met
				185					190					195
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys
				200					205					210
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu
				215					220					225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 agaatgcttt attttggaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250
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 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
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 cactgatgac atcacggcca ctgtgccata caaccttgt gtcagggcca 550
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 cttncacctg gttattgagc tggaggacct ggggccccag tttaggttcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
 gaaccccttg cggccgctgg ggtatctctc gagaaaagag agggccaata 800
 tgacccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
ttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
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aggacttcta cgacttcaag gcggtcaaca tccggggcaa actgggtgtgc 150
ctggagaagt accgcggtac ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctggggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300
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cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
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cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
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ccgcgtctcc tctccacca cctcatcccg cccacctgtg tggggctgac 650
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 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
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 taataaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
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 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala 30
 20 25
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly 45
 35 40
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr 60
 50 55
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly 75
 65 70
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly 90
 80 85
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg 105
 95 100
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val 120
 110 115
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr 135
 125 130
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala 150
 140 145
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
 aactgcctg ggcacaagg gccaaaagc aggcagcctg ccagggccct 2100
 ccctctgtc catccccac attccctgt ctgtccttgt gatttggcat 2150
 aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194
 <211> 615
 <212> PRT
 <213> Homo sapiens

<400> 194
 Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
 1 5 10 15
 Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
 20 25 30
 Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
 35 40 45
 Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
 50 55 60
 Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
 65 70 75
 Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
 80 85 90
 Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
 95 100 105
 Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
 110 115 120
 Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
 125 130 135
 Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
 140 145 150
 Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
 155 160 165
 Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
 170 175 180
 Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
 185 190 195
 Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
 200 205 210
 Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
 215 220 225
 Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
 230 235 240
 His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

					245					250					255
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro	
				260					265					270	
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn	
				275					280					285	
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln	
				290					295					300	
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser	
				305					310					315	
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile	
				320					325					330	
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile	
				335					340					345	
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe	
				350					355					360	
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser	
				365					370					375	
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu	
				380					385					390	
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val	
				395					400					405	
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His	
				410					415					420	
Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg	
				425					430					435	
Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly	
				440					445					450	
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly	
				455					460					465	
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu	
				470					475					480	
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala	
				485					490					495	
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys	
				500					505					510	
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu	
				515					520					525	
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val	
				530					535					540	
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys	
				545					550					555	
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys	

	560		565		570
Ala Phe Cys Lys Lys Ile Ser His Phe Lys Ile Pro Lys Tyr					
	575		580		585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile					
	590		595		600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu					
	605		610		615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
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 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacott cctgtatggt acccccacga tgttcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctgggt gttgcttatg gaaccacaga gaacagttcc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctggggtgag cctcagaaga cagagggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
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 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggcctctgga gtgctacagc tgctgcaga aagcagatga cggatgtccc 150
 ccgaacaaga tgaagacagt gaagtgcgcy ccgggcgttg acgtctgcac 200
 cgaggccgtg ggggcggttg agaccatcca cggaacaatt tcgctggcag 250
 tgccggggtg cggttcggga ctccccggca agaatagccg cggcctggat 300
 ctccacgggc ttctggcggt catccagctg cagcaatgcy ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac cggcgaggta 400
atgagagatgc ataccggccc aacggcggtg agtgctacag ctgtgtgggc 450
ctgagccggg aggcgtgcca gggatcatcg ccgcccgtcg tgagctgcta 500
caacgccagc gatcatgtct acaagggctg cttcgacggc aacgtcacct 550
tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
gatgaattct gcaactcgga tggagtaaca ggcccagggt tcacgctcag 650
tggtctctgt tgcagggggt cccgctgtaa ctctgacctc cgcaacaaga 700
cctactcttc cctcgaatc ccaccccttg tccggctgcc ccctccagag 750
cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800
agtgaagacc acatccacca ccaaacccat gccagcgcca accagtca 850
ctccagagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900
ttgactggag gcgccgtggt ccaccaggac cgcagcaatt cagggcgagta 950
tcctgcaaaa gggggggccc agcagcccca taataaaggc tgtgtggctc 1000
ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050
ctgtgagctt ctccacctgg aaatttcctt ctcacctact tctctggccc 1100
tgggtacccc tcttctcatc acttctgttt cccaccactg gactgggctg 1150
gcccagcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
gggtgttcta gctttttgag gacagctcct gtatcctctt catccttctc 1300
tctccgcttg tctcttctg atgttaggac agagtgaag aagtcagctg 1350
tcacggggaa ggtgagagag aggatgctaa gcttctact cactttctcc 1400
tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
ctctaagcac tgcctccctt actcccgcga tctttgggga atcggttccc 1500
catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccgtac 1550
ccaattcgcc ctatagtga tctga 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5				10					15

Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala	
				20					25				30	

Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
 cgggactcgg cggggtcctcc tgggagtcctc ggaggggacc ggctgtgcag 50
 acgccatgga gttggtgctg gtcttctctc gcagcctgct ggcccccatg 100
 gtctctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttcgct gtggctcctc 200
 tctcggttgg gatctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcaggtagg aagcctctgg aacctgaggc ggctgcttga acctttggat 400
 gcaaattgctg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
 cattctccca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggtcctgc ccacctccc tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtcttttggt ctacttgttt gtggatggta 650
 ttgtgtttgt tagtgaactg tggactcgct ttcccaggca ggggctgagc 700
 cacatggcca tctgtctctc cctgcccccg tggccctcca tcaccttctg 750
 ctctaggagg gctgcttggt gcccgagacc agccccctcc cctgatttag 800
 ggatgcgtag ggtaagagca cgggcagtag tcttcagtcg tcttgggacc 850
 tgggaagggt tgcagcactt tgtcatcatt cttcatggac tcctttcaact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
 tctcttagca actggagata caaagcaagg agctggtgag cccagcgttg 1000
 acgtcaggca ggctatgccc ttccgtggtt aatttcttcc cagggggttc 1050
 cacgaggagt ccccatctgc cccgccctt cacagagcgc cgggggattc 1100
 caggcccagg gcttctactc tgcccctggg gaatgtgtcc cctgcataac 1150
 ttctcagcaa taactccatg ggctctggga ccttaccctc tccaaacctc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtcctctg aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctc tagatgggca gcagaggcaa ctcccgcatc 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttgaga 1450
ctcagcaggc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500
aacgagagtg ggaactcaac ccagatccc cccctcctgt cctctgtgtt 1550
cccgcggaac ccaaccaaac cgtgcgctgt gaccattgc tgttctctgt 1600
atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatccttt 1650
gtttcct 1657

<210> 199
<211> 120
<212> PRT
<213> Homo sapiens

<400> 199
Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met
1 5 10 15
Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
20 25 30
His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
35 40 45
Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
50 55 60
Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
65 70 75
Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
80 85 90
Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
95 100 105
Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
110 115 120

<210> 200
<211> 415
<212> DNA
<213> Homo sapiens

<400> 200
aaacttgacg coactgaagat cccggtcctt cctgccgtgg tgctcctctc 50
cctcctggtg ctccactctg cccaggagc caccctgggt ggtctgagg 100
aagaagcac cattgagaat tatgcgtcac gaccgaggc ctttaacacc 150
ccgttctcga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
cctgaactgg caccgctctc ttgagtctat caaaaggaaa ctctctttcc 250
tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300
gatgccagtg gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
tgattctcaa cctaccataa ctctttctct cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met	Lys	Ile	Pro	Val	Leu	Pro	Ala	Val	Val	Leu	Leu	Ser	Leu	Leu
1				5					10					15
Val	Leu	His	Ser	Ala	Gln	Gly	Ala	Thr	Leu	Gly	Gly	Pro	Glu	Glu
				20					25					30
Glu	Ser	Thr	Ile	Glu	Asn	Tyr	Ala	Ser	Arg	Pro	Glu	Ala	Phe	Asn
				35					40					45
Thr	Pro	Phe	Leu	Asn	Ile	Asp	Lys	Leu	Arg	Ser	Ala	Phe	Lys	Ala
				50					55					60
Asp	Glu	Phe	Leu	Asn	Trp	His	Ala	Leu	Phe	Glu	Ser	Ile	Lys	Arg
				65					70					75
Lys	Leu	Pro	Phe	Leu	Asn	Trp	Asp	Ala	Phe	Pro	Lys	Leu	Lys	Gly
				80					85					90
Leu	Arg	Ser	Ala	Thr	Pro	Asp	Ala	Gln						
				95										

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50
ggtggagatt gcctttgcoct cagtgattct cacctgcctc tcccttctgg 100
cagcaggagt ctcccagggt gttctttctcc agccagttcc aactcaggag 150
acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200
atgagagtgt ttttgtgtaa agtatTTTTT agaatactgt tgacttcttc 250
atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300
tcaaccctca aatttttggt atactagatg gcttcattt acccaccact 350
attttaaggT ccttttatTT ttaggttcaa ggttcatttg acttgagaaa 400
gtgccctctt gcagcttcat tgattttggt tatcttcaact attaattgta 450
acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500
cctgggtgcc cctgacacat ttatgtagtg atoccacaaa tgtgattggt 550
aatttaaatg ttatttotaat attagtacat tcagttgtga tgtaatatga 600
ataaccagaa totattttctt aaaagttttg agtatatttt tcaactagat 650
atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgtggg ctatgctgcc 50
 gcttcggctc tggctgctgt tgttctctct gccctcagcg caggggccgc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgtcc cctcaagggtg 350
 tagtggtggt gagcacttta ttttggaaat gatcgggctg ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctacaggttcc taaatggatg 450
 gagcctgccca tcccagtcct ctcttcagtc aagacatcag agtaccatga 500
 tatcatgtat cctgcttggg catcttggga agggggaccc gctgtttggc 550
 caattttatcc tacaggtctt ggacgggtgg acctcttcag agaagatctg 600
 gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaaag agatcctctc attctctctg 700
 ctccgaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgtgat cactgcaaat acaagtatct gttaattttt cgaggcgtag 850
 ctgcaagttt ccggttttaa cacctcttcc tgtgtggctc actgttttcc 900
 catgttggtg atgagtggtc agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atccagtc aacagatctc ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagt aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattatto ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtctt cttgttgga acagatctca 1250
 gatctctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300
 tatctgtat caagccaaat acctggtttt ccttatcatg ctgcacccag 1350
 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt ttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaaccaac totaccttc attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgat cctttgttc cattatttg agcagaaaaa tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca agcgtgac 1650
 tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700
 cttggggatc atttctgaa tggctaaagg aagcgtgac catgccatgc 1750
 aatgatgtag gaggttcttt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcagggtccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

	95		100		105
Ser Arg Cys Ser	Gly Val Glu His Phe	Ile Leu Glu Val Ile	Gly		
	110	115	120		
Arg Leu Pro Asp Met	Glu Met Val Ile	Asn Val Arg Asp Tyr Pro			
	125	130	135		
Gln Val Pro Lys Trp	Met Glu Pro Ala	Ile Pro Val Phe Ser Phe			
	140	145	150		
Ser Lys Thr Ser	Glu Tyr His Asp Ile	Met Tyr Pro Ala Trp Thr			
	155	160	165		
Phe Trp Glu Gly	Gly Pro Ala Val Trp	Pro Ile Tyr Pro Thr Gly			
	170	175	180		
Leu Gly Arg Trp	Asp Leu Phe Arg Glu	Asp Leu Val Arg Ser Ala			
	185	190	195		
Ala Gln Trp Pro	Trp Lys Lys Lys Asn	Ser Thr Ala Tyr Phe Arg			
	200	205	210		
Gly Ser Arg Thr	Ser Pro Glu Arg Asp	Pro Leu Ile Leu Leu Ser			
	215	220	225		
Arg Lys Asn Pro	Lys Leu Val Asp Ala	Glu Tyr Thr Lys Asn Gln			
	230	235	240		
Ala Trp Lys Ser	Met Lys Asp Thr Leu	Gly Lys Pro Ala Ala Lys			
	245	250	255		
Asp Val His Leu	Val Asp His Cys Lys	Tyr Lys Tyr Leu Phe Asn			
	260	265	270		
Phe Arg Gly Val	Ala Ala Ser Phe Arg	Phe Lys His Leu Phe Leu			
	275	280	285		
Cys Gly Ser Leu	Val Phe His Val Gly	Asp Glu Trp Leu Glu Phe			
	290	295	300		
Phe Tyr Pro Gln	Leu Lys Pro Trp Val	His Tyr Ile Pro Val Lys			
	305	310	315		
Thr Asp Leu Ser	Asn Val Gln Glu Leu	Leu Gln Phe Val Lys Ala			
	320	325	330		
Asn Asp Asp Val	Ala Gln Glu Ile Ala	Glu Arg Gly Ser Gln Phe			
	335	340	345		
Ile Arg Asn His	Leu Gln Met Asp Asp	Ile Thr Cys Tyr Trp Glu			
	350	355	360		
Asn Leu Leu Ser	Glu Tyr Ser Lys Phe	Leu Ser Tyr Asn Val Thr			
	365	370	375		
Arg Arg Lys Gly	Tyr Asp Gln Ile Ile	Pro Lys Met Leu Lys Thr			
	380	385	390		

Glu Leu

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
 caccctccca tttctcgcca tggccctctg actgtctctg atccctgctg 50
 cctctgcctc tttcctctg gcctttggca ccggagtggg gttctgctgc 100
 tttacctccc ttcgccaact tcttgagggt atcccgaggt ctggtggtcc 150
 ggatgcccg cagggatggc tggctgccct gcaggaccgc agcatccttg 200
 cccccctggc atgggatctg gggctcctgc ttctattgt tgggcagcac 250
 agcctcatgg cagctgaaa agtgaaggca tggacatccc ggtactttgg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
 tgggtgatgc gtactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cactcgggtg ccgtctctct gctttgtgct 450
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<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65				70					75	
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

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caacaaaaaa cttaagcttt aatttcattc ggaattccac agttttctta 200
gctccctgga cccggttgac ctgttggtgc ttcccgctgg ctgctctatc 250
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cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgctcttcc 350
gagtaggatg tcaactgagat ccctcaaatg gagcctcctg ctgctgtcac 400
tcttgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450
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tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850
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tgataattat tctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaagggt ttccctccat actgcagtgg gttgggttat 1050
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agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
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 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcaactccatt aatgtaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaattatt 2050
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<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
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Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
				20					25					30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
				35					40					45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
				50					55					60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
				65					70					75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
				80					85					90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys
				95					100					105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
				110					115					120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
				125					130					135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
				140					145					150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
				155					160					165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
170 175 180

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
185 190 195

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
200 205 210

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
215 220 225

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
230 235 240

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
245 250 255

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
260 265 270

Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
275 280 285

Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
290 295 300

Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
305 310 315

Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
320 325 330

Tyr

<210> 210
<211> 745
<212> DNA
<213> Homo sapiens

<400> 210
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caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcagtga 150
gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
actctttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300
tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
ggtaagggac caggaggacc acctoccaa ggctgatgt atcagtgcaa 400
cccaacaaa gtogatgacc tgagcaagtt cggaacaaac attgcaaaca 450
tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
ctgttttttt actcaggaac gtgctacacg accagtgatc tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tcacagtgggt ttaccatgt cattctgaaa tttttctcta ctagtatatgt 700
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<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
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Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
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aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
			20						25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
			35						40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
			50						55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
			65						70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
			80						85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
			95						100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
			110						115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
			125						130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
			140						145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
			155						160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
			170						175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
			185						190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
			200						205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
			215						220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
			230						235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
			245						250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
			260						265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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gcattgcttt ttacagaaat atattanctt tttagagtaa tttctagttt 150
ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200
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ttaagagtggt ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagtcctc aatttttatg aagcttcaga 350
agaactgggtt tgtttacatg caagcctata gttgaaatat ttttcaggaa 400
ttacatgaat gacagtcctt gaaccaatgt gtttgcttga tttcaaccag 450
agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500
ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
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agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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ccaccctcat gcacaggctg gcgccacact gctccttcg cgcgtggctg 150
ctctgtaacg gcagtttggt ccgatacaag caccogtctg aggaggagct 200
tcgggccctg gcggggaagc cgaggccag aggcaggaaa gagcggtggg 250
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgcccg 300

ttccagctgg agacctgccc cctcaccgacc gtggatgccc tggctctgcg 350
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 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

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Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp
				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

actcgggcgg cgtgtacctc ttacagagg cctactacta catgctggga 400
 ccagccaagg agactaacat tgctgtgttc tgggtgcctgc tcacagtgc 450
 cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
 aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550
 ctgctggcca tgctggtgca agcg 574

<210> 218
 <211> 2571
 <212> DNA
 <213> Homo sapiens

<400> 218
 gggtccctaca tcctctcctc tgagaatcag agagcataat cttcttacgg 50
 gccctgtatt tattaacgtg gcttaatctg aaggttctca gtcaaatctt 100
 ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
 ggctgggttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200
 cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggtt 250
 cagtcctgct aactacattg acaatgtggg caacctgcac ttctgtatt 300
 cagaactctg taaagggtgc tccactacg gcctgaccaa agatagggaag 350
 aggcgctcac aagatggctg tcacagcggc tgtgcgagcc tcacagccac 400
 ggctccctcc ccagaggttt ctgcagctgc caccatctcc ttaatgacag 450
 acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500
 cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550
 acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
 atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
 aaccatgccg accagggcag ggaaaattct gaaaacacca ctgccctga 700
 agtctttcca aggttgtacc acctgattcc agatggtgaa attaccagca 750
 tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800
 ggagtgagcg aaaccccaact ggtccatctc attatccaac acatttatcg 850
 tgatgggggt atcgccagag acggccggct actgccagga gacatcattc 900
 taaagggtcaa cgggatggac atcagcaatg tccctcacaac ctacgctgtg 950
 cgtctcctgc gccagccctg ccagggtgctg tggctgactg tgatgcgtga 1000
 acagaagtgc cgcagcagga acaatggaca ggccccgatg gcctacagac 1050
 ccogagatga cagctttcat gtgattctca acaaaagtag cccgaggag 1100
 cagcttgtaa taaaactggg gcgcaagggt gatgagcctg gggttttcat 1150
 cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

1					5					10					15
Asn	Tyr	Ile	Asp	Asn	Val	Gly	Asn	Leu	His	Phe	Leu	Tyr	Ser	Glu	
				20					25					30	
Leu	Cys	Lys	Gly	Ala	Ser	His	Tyr	Gly	Leu	Thr	Lys	Asp	Arg	Lys	
				35					40					45	
Arg	Arg	Ser	Gln	Asp	Gly	Cys	Pro	Asp	Gly	Cys	Ala	Ser	Leu	Thr	
				50					55					60	
Ala	Thr	Ala	Pro	Ser	Pro	Glu	Val	Ser	Ala	Ala	Ala	Thr	Ile	Ser	
				65					70					75	
Leu	Met	Thr	Asp	Glu	Pro	Gly	Leu	Asp	Asn	Pro	Ala	Tyr	Val	Ser	
				80					85					90	
Ser	Ala	Glu	Asp	Gly	Gln	Pro	Ala	Ile	Ser	Pro	Val	Asp	Ser	Gly	
				95					100					105	
Arg	Ser	Asn	Arg	Thr	Arg	Ala	Arg	Pro	Phe	Glu	Arg	Ser	Thr	Ile	
				110					115					120	
Arg	Ser	Arg	Ser	Phe	Lys	Lys	Ile	Asn	Arg	Ala	Leu	Ser	Val	Leu	
				125					130					135	
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln	
				140					145					150	
Gly	Arg	Glu	Asn	Ser	Glu	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro	
				155					160					165	
Arg	Leu	Tyr	His	Leu	Ile	Pro	Asp	Gly	Glu	Ile	Thr	Ser	Ile	Lys	
				170					175					180	
Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val	
				185					190					195	
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile	
				200					205					210	
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly	
				215					220					225	
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro	
				230					235					240	
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu	
				245					250					255	
Trp	Leu	Thr	Val	Met	Arg	Glu	Gln	Lys	Phe	Arg	Ser	Arg	Asn	Asn	
				260					265					270	
Gly	Gln	Ala	Pro	Asp	Ala	Tyr	Arg	Pro	Arg	Asp	Asp	Ser	Phe	His	
				275					280					285	
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys	
				290					295					300	
Leu	Val	Arg	Lys	Val	Asp	Glu	Pro	Gly	Val	Phe	Ile	Phe	Asn	Val	
				305					310					315	
Leu	Asp	Gly	Gly	Val	Ala	Tyr	Arg	His	Gly	Gln	Leu	Glu	Glu	Asn	

320	325	330
Asp Arg Val Leu Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser	
335	340	345
Pro Glu Ser Ala Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val	
350	355	360
His Leu Val Val Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile	
365	370	375
Phe Gln Glu Ala Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly	
380	385	390
Pro Gly Glu Arg Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile	
395	400	405
Thr Cys His Glu Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu	
410	415	420
Ser Leu Gly Met Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp	
425	430	435
Asp Leu Pro Ile Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile	
440	445	450
Ser Arg Asp Gly Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val	
455	460	465
Asp Gly Val Glu Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala	
470	475	480
Leu Leu Lys Arg Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu	
485	490	495
Val Lys Glu Tyr Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala	
500	505	510
Leu Asp Ser Asn His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro	
515	520	525
Ser Trp Val Met Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys	
530	535	540
Lys Asp Ile Val Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe	
545	550	555
Cys Ile Val Gly Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe	
560	565	570
Phe Ile Lys Ser Ile Val Glu Gly Thr	Pro Ala Tyr Asn Asp Gly	
575	580	585
Arg Ile Arg Cys Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser	
590	595	600
Thr Ser Gly Met Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu	
605	610	615
Leu Lys Gly Arg Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr	
620	625	630
Phe Leu		

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc tctccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaataca cctgggtcaa gtacaaccct 450
 ctggagtctc tgatcaaaga cgtggattgg ttctgtcttg ggtcacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgcggtgct ggaggctgtg caaaggctgg gtcctcgggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaaataaa ttctttccca atgccccaac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln
95 100 105

Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr
110 115 120

Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu
125 130 135

Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys
140 145 150

Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys
155 160 165

Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala
170 175 180

Asp Ile His Val

<210> 222
<211> 992
<212> DNA
<213> Homo sapiens

<400> 222
ggcacgagcc aggaactagg aggttctcac tgcccagaca gaggccctac 50
accacccgag gcatggggct ccctgggctg ttctgcttgg ccgtgctggc 100
tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
ccattgccta caaagtcctg gaagttttcc caaaggccg ctgggtgctc 200
ataacctgct gtgcaccca gccaccaccg cccatcacct attccctctg 250
tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccacgagc 300
cggcctcctt caacctcaac gtcacactca agtccagtc agacctgctc 350
acctactctt gcggggcgct ctcacactca ggtgccatg tggacagtgc 400
caggctacag atgcactggg agctgtggtc caagccagt tctgagctgc 450
gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
atctgccagg cgtcctcggg cagcccacct atccaaca gctgatcgg 550
gaaggatggg cagggtccacc tgcagcagag accatgccac aggcagcctg 600
ccaactcttc cttcctgccg agccagacat cggactggtt ctggtgccag 650
gctgcaaaca acgccaatgt ccagcacagc gccctcacag tgggtccccc 700
aggtggtgac cagaagatgg aggactggca ggggtccctg gagagcccca 750
tccttgccct gccgctctac aggagcacc gccgtctgag tgaagaggag 800
tttggggggg tcaggatagg gaatggggag gtcagaggag gcaaagcagc 850
agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactggt cgtatttggga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
1 5 10 15

Ser Phe Ser Lys Ala Arg Glu Glu Ile Thr Pro Val Val Ser
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
35 40 45

Leu Ile Thr Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met
260 265

<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
 ggtccttaat ggcagcagcc gccgctaoca agatccttct gtgcctcccg 50
 cttctgtctcc tgcgtgcocg ctggtcccgg gctggggcag ccgaccctca 100
 ctctcttttgc tatgacatca ccgtcatccc taagttcaga cctggaccac 150
 ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200
 gactgtggca acaagacagt cacacctgtc agtccoctgg ggaagaaact 250
 aaatgtcaca acggcctgga aagcacagaa cccagtactg agagaggtgg 300
 tggacatact tacagagcaa ctgcgtgaca ttcagtggga gaattacaca 350
 cccaaggaac cctcacccct gcaggcaagg atgtctttgtg agcagaaaagc 400
 tgaaggacac agcagtggtat cttggcagtt cagtttcgat gggcagatct 450
 tcctctctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500
 gccagaaaaga tgaagaaaaa gtggggagaat gacaagggtg tggccatgtc 550
 cttccattac ttctcaatgg gagactgtat aggatggctt gaggacttct 600
 tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
 atgtcctcag gcacaaocca actcagggcc acagccacca cctcatcct 700
 ttgctgcctc ctcacatcc tccctgctt cctcctccct ggcatctgag 750
 gagagtcctt tagagtgaca ggttaaagct gataccaaaa ggctcctgtg 800
 agcacggtct tgatcaaaact cgccttctg tctggccagc tgcccacgac 850
 ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
 ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccaga 950
 agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
 ttccctgcact taaagttctg gctgactaaa caagatatat cattttcttt 1050
 cttctctttt tgtttgaaaa atcaagtact tctttgaatg atgatctctt 1100
 tcttgcaaat gatattgtca gtaaaataat caggttagac ttcagacctc 1150
 tggggattct ttccgtgtcc tgaaagagaa tttttaaatt atttaataag 1200
 aaaaaattta tattaatgat tgtttcttct agtaatttat tgtctgtgac 1250
 tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
 1 5 10 15
 Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
 20 25 30
 His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
 35 40 45
 Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
 50 55 60
 Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
 65 70 75
 Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
 80 85 90
 Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
 95 100 105
 Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
 110 115 120
 Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
 125 130 135
 Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
 140 145 150
 Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
 155 160 165
 Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
 170 175 180
 Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
 185 190 195
 Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
 200 205 210
 Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
 215 220 225
 Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
 230 235 240
 Phe Ile Leu Pro Gly Ile
 245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac ccatctatata aaactatata ttttcatttc 50
 tgctgtatag tgccctgggc ctcaaatatt taattctgtt ttctgacttt 100
 caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

gggttttaatt ttggtggtag cctcaccoca attctgggtg ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgtatg tactctcccc 550
 ttacccttcc tctctccatt caagcattca aagtatat tcaatgaatt 600
 aaaccttgca gcaaggagacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttcctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctccttt ccgagccaaa atcccaggcg atgggtgaatt atgaactgac 50
 cacaccatga agctcttctg gcaggttaact gtgcaccacc acacctggaa 100

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800
 cagcaacagc agtcccgctcc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcttggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctccccc aaaaaactta taaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttctgtgata tgcttatata ttaagtctat gggctgggta aaaaaacag 2150
 attatattaa aatttaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

					185						190					195	
Phe	Asn	Leu	Lys	Tyr	200	Leu	Asn	Leu	Gly	Met	205	Cys	Asn	Ile	Lys	Asp	210
Met	Pro	Asn	Leu	Thr	215	Pro	Leu	Val	Gly	Leu	220	Glu	Glu	Leu	Glu	Met	225
Ser	Gly	Asn	His	Phe	230	Pro	Glu	Ile	Arg	Pro	235	Gly	Ser	Phe	His	Gly	240
Leu	Ser	Ser	Leu	Lys	245	Lys	Leu	Trp	Val	Met	250	Asn	Ser	Gln	Val	Ser	255
Leu	Ile	Glu	Arg	Asn	260	Ala	Phe	Asp	Gly	Leu	265	Ala	Ser	Leu	Val	Glu	270
Leu	Asn	Leu	Ala	His	275	Asn	Asn	Leu	Ser	Ser	280	Leu	Pro	His	Asp	Leu	285
Phe	Thr	Pro	Leu	Arg	290	Tyr	Leu	Val	Glu	Leu	295	His	Leu	His	His	Asn	300
Pro	Trp	Asn	Cys	Asp	305	Cys	Asp	Ile	Leu	Trp	310	Leu	Ala	Trp	Trp	Leu	315
Arg	Glu	Tyr	Ile	Pro	320	Thr	Asn	Ser	Thr	Cys	325	Cys	Gly	Arg	Cys	His	330
Ala	Pro	Met	His	Met	335	Arg	Gly	Arg	Tyr	Leu	340	Val	Glu	Val	Asp	Gln	345
Ala	Ser	Phe	Gln	Cys	350	Ser	Ala	Pro	Phe	Ile	355	Met	Asp	Ala	Pro	Arg	360
Asp	Leu	Asn	Ile	Ser	365	Glu	Gly	Arg	Met	Ala	370	Glu	Leu	Lys	Cys	Arg	375
Thr	Pro	Pro	Met	Ser	380	Ser	Val	Lys	Trp	Leu	385	Leu	Pro	Asn	Gly	Thr	390
Val	Leu	Ser	His	Ala	395	Ser	Arg	His	Pro	Arg	400	Ile	Ser	Val	Leu	Asn	405
Asp	Gly	Thr	Leu	Asn	410	Phe	Ser	His	Val	Leu	415	Leu	Ser	Asp	Thr	Gly	420
Val	Tyr	Thr	Cys	Met	425	Val	Thr	Asn	Val	Ala	430	Gly	Asn	Ser	Asn	Ala	435
Ser	Ala	Tyr	Leu	Asn	440	Val	Ser	Thr	Ala	Glu	445	Leu	Asn	Thr	Ser	Asn	450
Tyr	Ser	Phe	Phe	Thr	455	Thr	Val	Thr	Val	Glu	460	Thr	Thr	Glu	Ile	Ser	465
Pro	Glu	Asp	Thr	Thr	470	Arg	Lys	Tyr	Lys	Pro	475	Val	Pro	Thr	Thr	Ser	480
Thr	Gly	Tyr	Gln	Pro	485	Ala	Tyr	Thr	Thr	Ser	490	Thr	Thr	Val	Leu	Ile	495
Gln	Thr	Thr	Arg	Val		Pro	Lys	Gln	Val	Ala		Val	Pro	Ala	Thr	Asp	

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
 cagggccttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350
 cattgctggt aggctgatgc gcgctccact actaggacag ccaattggaa 2400
 gatgccaggg cttgcaagaa gtaagtttct tcaagaaga ccatatacaa 2450
 aacctctcca ctccactgac ctggtggtct tccccaactt tcagttatac 2500
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
 <211> 720
 <212> PRT
 <213> Homo sapiens

<400> 231
 Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
 1 5 10 15
 Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
 20 30
 Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
 35 40 45
 Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
 50 55 60
 Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
 65 70 75
 Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
 80 85 90
 Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
 95 100 105
 Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
 110 115 120
 Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
 125 130 135
 Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
 140 145 150
 Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
 155 160 165

Phe Val Met Leu Ser Leu Glu Phe Asp Tyr Met Cys Gln Tyr Asp	170	175	180
Tyr Val Glu Val Arg Asp Gly Asp Asn Arg Asp Gly Gln Ile Ile	185	190	195
Lys Arg Val Cys Gly Asn Glu Arg Pro Ala Pro Ile Gln Ser Ile	200	205	210
Gly Ser Ser Leu His Val Leu Phe His Ser Asp Gly Ser Lys Asn	215	220	225
Phe Asp Gly Phe His Ala Ile Tyr Glu Glu Ile Thr Ala Cys Ser	230	235	240
Ser Ser Pro Cys Phe His Asp Gly Thr Cys Val Leu Asp Lys Ala	245	250	255
Gly Ser Tyr Lys Cys Ala Cys Leu Ala Gly Tyr Thr Gly Gln Arg	260	265	270
Cys Glu Asn Leu Leu Glu Glu Arg Asn Cys Ser Asp Pro Gly Gly	275	280	285
Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn
				485					490					495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly
				500					505					510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly
				515					520					525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser
				530					535					540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile
				545					550					555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala
				560					565					570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg
				575					580					585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly
				590					595					600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp
				605					610					615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys
				620					625					630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp
				635					640					645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile
				650					655					660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly
				665					670					675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser
				680					685					690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe
				695					700					705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys
				710					715					720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttgctga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaatccoga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
aaggagtcca tggctaattt ccataagacc ctcatatttg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat ttcaaacca 400
gatctcactt tggaaagagt acaggcagaa aatcccaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccacgc gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg taccogagaa tgactttaac cttacaagt gtgaggagca 750
tcccagcat ctgggtggtg gcagggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850
aaggtaatg gattctctaa caactactgg ggaatggggg gcgaagacga 900
tgacctcaga ctcaggggtg agctocaaag aatgaaaatt tcccgcccc 950
tgccatgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggctgcg atcctcggtc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtgggcccgg ggtcgcgcag cgggctgtgg gcgcgcccgg aggagcgacc 50
gcccagcttc tcgagctcca gctgcattcc ctccgcgtcc gcccacgct 100
tctccgcctc cgggcccgcg aatggcccag gcagtggtgg cgcgcctcgg 150
ccgcatcctc tggcttgctt gctcctcgcc ctgggcccgg gcaggggtgg 200
ccgcagggct gtatgaactc aatctacca ccgatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg cccgctgacg cccaactcta ccgcttcacc tggatccaca 350
cccgcgtggt gttactggc aagatggaga aggttctcag ctccaccatc 400
cgtgtgggtg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggg tttgtggtcc 500
tccccatcac agagttcctc gtgggggacc ttgtgtcac ccagaacact 550

tcctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
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 acagctggga ctctggggac gggaccacaga tggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggactttctc gcctcgtcga agctgcagga aacccttcga 850
 ggcacccaag tgttggggcc caccctaatt cagaccttc aaaagatgac 900
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 accacaagat ccagggtgtg ccctccagaa tccagccggc tgtctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
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 caccctctgg ggtcagggtc tgetgccaga tgtgtctggg gcctttcttg 1300
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 aagggtgtac acatagatgg gcacactcac agagagaagt gtgcattgac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcggtt 2000
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 gttcttgogc cctttataag gcacatcag tccctgctgg ctggcagggg 2150

cctggatggg gggcaggact aatactgagt gattgcagag tgctttataa 2200
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 acgcctgtaa tcccagcact ttgggaggcc gaggcgggtg gatcacgaga 2350
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 aaaaaaatac aaaaagttag cggggcgtgg tgggtgggtg ctgtagtccc 2450
 agctactcgg gaggctgagg caggagaatg gtgcgaaccc gggaggcgga 2500
 gcttgcaagt agcccagatg gcgccactgc actccagcct gagtgcagaga 2550
 gcgagactct gtctcca 2567

<210> 241

<211> 423

<212> PRT

<213> Homo sapiens

<400> 241

Met	Ala	Gln	Ala	Val	Trp	Ser	Arg	Leu	Gly	Arg	Ile	Leu	Trp	Leu	1	5	10	15
Ala	Cys	Leu	Leu	Pro	Trp	Ala	Pro	Ala	Gly	Val	Ala	Ala	Gly	Leu	20	25	30	
Tyr	Glu	Leu	Asn	Leu	Thr	Thr	Asp	Ser	Pro	Ala	Thr	Thr	Gly	Ala	35	40	45	
Val	Val	Thr	Ile	Ser	Ala	Ser	Leu	Val	Ala	Lys	Asp	Asn	Gly	Ser	50	55	60	
Leu	Ala	Leu	Pro	Ala	Asp	Ala	His	Leu	Tyr	Arg	Phe	His	Trp	Ile	65	70	75	
His	Thr	Pro	Leu	Val	Leu	Thr	Gly	Lys	Met	Glu	Lys	Gly	Leu	Ser	80	85	90	
Ser	Thr	Ile	Arg	Val	Val	Gly	His	Val	Pro	Gly	Glu	Phe	Pro	Val	95	100	105	
Ser	Val	Trp	Val	Thr	Ala	Ala	Asp	Cys	Trp	Met	Cys	Gln	Pro	Val	110	115	120	
Ala	Arg	Gly	Phe	Val	Val	Leu	Pro	Ile	Thr	Glu	Phe	Leu	Val	Gly	125	130	135	
Asp	Leu	Val	Val	Thr	Gln	Asn	Thr	Ser	Leu	Pro	Trp	Pro	Ser	Ser	140	145	150	
Tyr	Leu	Thr	Lys	Thr	Val	Leu	Lys	Val	Ser	Phe	Leu	Leu	His	Asp	155	160	165	
Pro	Ser	Asn	Phe	Leu	Lys	Thr	Ala	Leu	Phe	Leu	Tyr	Ser	Trp	Asp	170	175	180	
Phe	Gly	Asp	Gly	Thr	Gln	Met	Val	Thr	Glu	Asp	Ser	Val	Val	Tyr	185	190	195	

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 242
 catttcctta ccctggaccc agctcc 26

 <210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccaagaccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggcccgt tgcctcctgc tcctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150
gcaacccag gacagagctg gagccagggc cagctgggatg cccatgttcc 200
agagcggaag gagcgagac acccaacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg cccccgtccc ctcccttccct tattttatcc tgctgccccca 350
gaacataggt ctggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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tgctggcctg gcttgatct tccaccatgt tcctgttgct gccttttgat 100
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 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

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gga 1103

<210> 250
<211> 240
<212> PRT
<213> Homo sapiens

<400> 250
Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15
His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30
Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45
Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60
His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75
Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90
Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105
Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120
Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135
Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150
Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165
Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180
Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195
Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210
Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225
Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240
<210> 251
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
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caacatgcct caccctcatc tatactcttt ggcagctcac agggctcagca 100
gcctctggac ccgtgaaaga gctggtcggg tccgttggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacaCaac cctctttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatat ggagagagta gacttcccat atggaggcta 300
ctccctgaag ctacgcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccaccga ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcaaca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaac 500
atgggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550
aatgagtgccc ataatgggtc cactctcccc atctctgga gatggggaga 600
aagtgatatg accttcatct cgtttgccag gaaccctgtc agcagaaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700
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cctaacatat gcccccattc tggagagaac acagagtacg acacaatccc 900
tcactaatat agaacaatcc taaaggaaga tccagcaaat acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgtctcag 1000
atgccagaca caccaaggct atttgctat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

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Gln	Leu	Thr	Gly	Ser	20	Ala	Ala	Ser	Gly	Pro	25	Val	Lys	Glu	Leu	Val	30
Gly	Ser	Val	Gly	Gly	35	Ala	Val	Thr	Phe	Pro	40	Leu	Lys	Ser	Lys	Val	45
Lys	Gln	Val	Asp	Ser	50	Ile	Val	Trp	Thr	Phe	55	Asn	Thr	Thr	Pro	Leu	60
Val	Thr	Ile	Gln	Pro	65	Glu	Gly	Gly	Thr	Ile	70	Ile	Val	Thr	Gln	Asn	75
Arg	Asn	Arg	Glu	Arg	80	Val	Asp	Phe	Pro	Asp	85	Gly	Gly	Tyr	Ser	Leu	90
Lys	Leu	Ser	Lys	Leu	95	Lys	Lys	Asn	Asp	Ser	100	Gly	Ile	Tyr	Tyr	Val	105
Gly	Ile	Tyr	Ser	Ser	110	Ser	Ser	Leu	Gln	Gln	Pro	Ser	Thr	Gln	Glu	Tyr	120
Val	Leu	His	Val	Tyr	125	Glu	His	Leu	Ser	Lys	130	Pro	Lys	Val	Thr	Met	135
Gly	Leu	Gln	Ser	Asn	140	Lys	Asn	Gly	Thr	Cys	145	Val	Thr	Asn	Leu	Thr	150
Cys	Cys	Met	Glu	His	155	Gly	Glu	Glu	Asp	Val	160	Ile	Tyr	Thr	Trp	Lys	165
Ala	Leu	Gly	Gln	Ala	170	Ala	Asn	Glu	Ser	His	175	Asn	Gly	Ser	Ile	Leu	180
Pro	Ile	Ser	Trp	Arg	185	Trp	Gly	Glu	Ser	Asp	190	Met	Thr	Phe	Ile	Cys	195
Val	Ala	Arg	Asn	Pro	200	Val	Ser	Arg	Asn	Phe	205	Ser	Ser	Pro	Ile	Leu	210
Ala	Arg	Lys	Leu	Cys	215	Glu	Gly	Ala	Ala	Asp	220	Asp	Pro	Asp	Ser	Ser	225
Met	Val	Leu	Leu	Cys	230	Leu	Leu	Leu	Val	Pro	235	Leu	Leu	Leu	Ser	Leu	240
Phe	Val	Leu	Gly	Leu	245	Phe	Leu	Trp	Phe	Leu	250	Lys	Arg	Glu	Arg	Gln	255
Glu	Glu	Tyr	Ile	Glu	260	Glu	Lys	Lys	Arg	Val	265	Asp	Ile	Cys	Arg	Glu	270
Thr	Pro	Asn	Ile	Cys	275	Pro	His	Ser	Gly	Glu	280	Asn	Thr	Glu	Tyr	Asp	285
Thr	Ile	Pro	His	Thr	290	Asn	Arg	Thr	Ile	Leu	295	Lys	Glu	Asp	Pro	Ala	300
Asn	Thr	Val	Tyr	Ser	305	Thr	Val	Glu	Ile	Pro	310	Lys	Lys	Met	Glu	Asn	315
Pro	His	Ser	Leu	Leu		Thr	Met	Pro	Asp	Thr		Pro	Arg	Leu	Phe	Ala	

Tyr Glu Asn Val Ile
335

<210> 254

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 254

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ggccgtgact ttccccctga agtccaaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagag gagagagtag acttccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350
gagtagctgc tgcattgcta cgagcacctg tcaaagccta aagtoacccat 400
gggtctcgag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt ataccctggaa ggccctggg 500
caagcagcca atgagtccca taatgggtcc atccctccca tctctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aaccctgtca 600
gcagaaaact ctcaagccc atccttgcca ggaagctctg tgaaggtgct 650
gctgatgacc cagattcttc catggtctct ctgtgtcttc tgttggtgcc 700
cctctgtctc agtctctttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtag attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgtctacga tgccagacac accaaggcta ttgctctatg agaattgtat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255

<211> 860

<212> DNA

<213> Homo sapiens

<400> 255

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 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
 tctatggttg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
 tatccaatgc caatogctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
 tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800
 gacaattttt catgaaatta ttctctcttc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val His
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
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 gacatctcgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatgt 150
 tctcaaaacc ccattctctg ctttgagtgg tggttccag gaattatagg 200
 agcaggctctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgtga tatccatcca 350
 ggctctctta aaaggtcttc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactgggtt 500
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgttgaatt ctggagggtc tgtttgggct 650
 cagtcagata gtcacgggtt tccttggtg tctgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10 15
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

FOR THE CHAIRMAN

Ser Leu Lys Lys Ser Trp Trp Lys
80

<213> Homo sapiens

CCCCCCTATGA ACCAAAGCTG CCGGAGGAGG CCGGAGGAGG

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15

Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
actcctgctg ctggttgtgg gctcctggct actcgcccg atcctggcct 150
ggacotatgc ctctataac aactgccgcc ggctccagt tttcccacag 200
ccccaaaac ggaactgggt ttggggctac ctgggectga tcaactctac 250
agaggagggc ttgaaggact cgaccagat gtcggccacc tattccacag 300
gctttacggg atggctgggt cccatcatcc ccttcacgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc toagctgcca ttgacccaa 400
ggataatctc ttcacaggt tctgaagcc ctggctggga gaaggatag 450
tgtgtagtgg cgggtgacaag tggagccgcc accgtcggat gctgacgccc 500
gccttcaccat tcaacatcct gaagtcctat ataacgatc tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
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cagaaatgca tcttcagctt tgacagccat tgtoaggaga ggcccagtga 700
atatattgcc accatcttgg agctcagtc cctgttagag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800
cggcgcttcc acagggcctg ccgctcgttg catgacttca cagacgctgt 850
catccgggag cggcgctgca cctcccccac tcagggtatt gatgattttt 900
tcaaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgcacag aggtgcaaga gcttctgaag gaccgcgacg cttaaagatg 1150
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 cctcatcgat attatagggg tccatcaca ccaactgtg tggccgagtc 1350
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 gcaggcgctt gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttcg gttcctgcca gaccacactg agcccgcag gaagtggaa 1550
 ttgatcatgc gcgccgagg cgggctttgg ctgcgggtgg agccctgaa 1600
 tgtaggcttg cagtacttt ctgaccatc cacctgtttt ttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
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 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Lys
 125 130 135

Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro
				455					460					465
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val
				470					475					480
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His
				485					490					495
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly
				500					505					510
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln	
				515					520					

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgtttgct ttccacagga ttcttaaatc ctctcttctc 100
 tcttctctct ctgactcca gggaaatata ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
 cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
 agcagactca agtaccaca tttttaaccc aagaggaaat ttgagaaagt 300
 ttcaggattt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
 gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaatactgt gtctgaagtg aaataagcat ctgttagtca gtcagaaac 450
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
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 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

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				20					25					30
Phe	Gln	Leu	Ser	Ala	Pro	His	Glu	Asp	Ala	Arg	Leu	Thr	Pro	Glu
				35					40					45
Glu	Leu	Glu	Arg	Ala	Ser	Leu	Leu	Gln	Ile	Leu	Pro	Glu	Met	Leu
				50					55					60

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 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatatctt acagtcaactg ttgtcttgcc tgagggttga atttttttta 1250
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
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Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20				25					30	
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35				40					45	
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50				55					60	
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65				70					75	
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80					85				90	
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95				100					105	
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
				110				115					120	
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
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Ala	Gly	Val	Val	Pro	Gly	Ala								
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<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

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 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaaa gtctggcagc caagtgtctt gacatgccag tgcctctgga 250

					35					40					45
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp	
				50					55					60	
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu	
				65					70					75	
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe	
				80					85					90	
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val	
				95					100					105	
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro	
				110					115					120	
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu	
				125					130					135	
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu	
				140					145					150	
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly	
				155					160					165	
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg	
				170					175					180	
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr	
				185					190					195	
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys	
				200					205					210	
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His	
				215					220					225	
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg	
				230					235					240	
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His	
				245					250					255	
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His	
				260					265					270	
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<210> 273
<211> 1158
<212> DNA
<213> Homo sapiens
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ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgcatccc 150
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<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
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 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgcccctt ccaatataca acaataactg gccctctttt gttctatttt 200
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 aacgggcatt gtctgtcag cttttggact ccctattgta ttgcccagag 350
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 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
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<210> 276
 <211> 131
 <212> PRT
 <213> Homo sapiens

<400> 276
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 20 25 30
 Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

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<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

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			20						25					30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	
			35						40					45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	
			50						55					60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	
			65						70					75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	
			80						85					90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	
			95						100					105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	
			110						115					120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	
			125						130					135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	
			140						145					150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	
			155						160					165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	
			170						175					180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	
			185						190					195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	
			200						205					210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	
			215						220					225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	
			230						235					240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	
			245						250					255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	
			260						265					270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	
			275						280					285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
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Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
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<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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<210> 281
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 281
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 35 40 45
 Gly Ala Val Glu Phe Pro Ala Asp Lys Met Val Ser Val Leu Val
 50 55 60
 Gln Glu Gly His Ala Val Ser Asp Met Leu Leu Pro Leu Asp Gly
 65 70 75
 Glu Leu Val Leu Ala Ser Gly Ala Gly Phe Gly Val Ser Asp Val
 80 85 90
 Gly Ser His Leu Asp Cys Gly Ala Gly Glu Pro Ala Val Phe Arg
 95 100 105
 Asp Ser Asp Arg Phe Ser Trp His Asp Pro His Leu Trp Arg Ser
 110 115 120
 Gly Asp Glu Ala Pro Gly Leu Phe Phe Val Asp Ala Glu Arg Val
 125 130 135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
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cctcatgtac ctgtttctctc tctggatgtt gtcccactga attcccatga 550
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
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Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe	Trp	Trp His Asn Lys	Gly Leu Ala Leu Ile	Phe	
	35		40	45	
Cys Ile Leu Gln	Ser	Leu Ala Leu Thr	Trp Tyr Ser Leu Ser	Phe	
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Ile Pro Phe Ala	Arg Asp Ala Val Lys	Lys Cys Phe Ala Val	Cys		
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 <213> Homo sapiens

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 <212> PRT
 <213> Homo sapiens

<400> 285

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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	20	25	30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	35	40	45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	50	55	60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	65	70	75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	80	85	90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	95	100	105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	110	115	120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	125	130	135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	140	145	150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	155	160	165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	170	175	180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	185	190	195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	200	205	210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	215	220	225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	230	235	240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	245	250	255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	260	265	270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	275	280	285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp				

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 <213> Homo sapiens

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 Glu Asn Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
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Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
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Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
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Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser	
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Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu	
				425					430					435	
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val	
				440					445					450	
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly	
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<211> 1658

<212> DNA

<213> Homo sapiens

<400> 290

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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
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 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
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 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
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 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

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Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val Val
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Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val
200	205	210
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys
215	220	225
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val
230	235	240
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn
245	250	255
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<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

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 <211> 180
 <212> PRT
 <213> Homo sapiens

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 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294
<211> 1164
<212> DNA
<213> Homo sapiens

<400> 294
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cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
ccccatcctt gggagaagtc agotccagca ccatgaaggg catctcgtt 250
gtgtgtatca ctgcagtgtc tgttgagct gtagaatctc tgaagctgct 300
gcagtgaat tcatgggaaa aatcctgtgt caacagcatt gcccttgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
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aagaacaact tcattttgta agccagtgtc gccaaggaaa ggaatgcagc 550
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cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
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<210> 295
<211> 237
<212> PRT

<213> Homo sapiens

<400> 295

Met Lys Gly Ile Leu Val Ala Gly Ile Thr Ala Val Leu Val Ala
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Ala Val Glu Ser Leu Ser Cys Val Gln Cys Asn Ser Trp Glu Lys
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Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
200 205 210
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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aatctgggtc	cccgggcggc	gggggcccaa	ggcctgacce	agactcgac	200
cgaaatcgac	cgggtcagtt	tacgcttttg	gggccccatg	accgcgagct	250
accgggacac	cgccccgact	ggtcttcccc	ggaagacaag	gataatccta	300
gaggacgaga	atgatgccat	ggccgacgcc	gaccgccttg	ctggaccagc	350
ggctgcccag	ctcttgcccg	ccacgggtgc	caccggcttt	agccggctgt	400
ccgccattaa	cgaggaggat	gggtcttcag	aagaggggggt	tgtgattaat	450
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agcgggggat	tccagcacga	ggtttatagc	caatagtcag	gagcctgaaa	550
tcaggctgac	ttaaacctgt	ccgcgctccc	ccgggaggtc	tactgaggac	600
ctgccaggct	cgcaggccac	ctgagccagc	tggtccacac	ctgggtctac	650
cccgagccgg	tggccgtcac	cctcaccacc	agccatgcc	tctcctgagg	700
atctgcggct	ggtgctgatg	ccctggggcc	cgtggcactg	ccactgcaag	750
tcgggcacca	tgagccggag	ccgggtctgg	aagctgcacg	gcctttccgg	800
gcgccttoga	gttggggcgc	tgagccagct	ccgcacggag	cacaagcctt	850
gcacctatca	acaatgtccc	tgcaaccgac	ttcgggaaga	gtgccccctg	900
gacacaagtc	tctgtactga	caccaactgt	gcctctcaga	gcaccaccag	950
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agagatgcaa	ccaatagaca	gaaaccagag	gtaatggcca	cttcatccac	1150
atgaggagat	gtcagtatct	caacctctct	tgccttttca	atcctagcac	1200
ccaactagata	tttttagtac	agaaaaacaa	aactgaaaaa	cacaa	1245

Arg Leu Ala Gly	Pro Ala Ala Ala Glu	Leu Leu Ala Ala Thr	Val
80	85		90
Ser Thr Gly Phe	Ser Arg Ser Ser Ala	Ile Asn Glu Glu Asp	Gly
95	100		105
Ser Ser Glu Glu	Gly Val Val Ile Asn	Ala Gly Lys Asp Ser	Thr
110	115		120
Ser Arg Glu Leu	Pro Ser Ala Thr Pro	Asn Thr Ala Gly Ser	Ser
125	130		135
Ser Thr Arg Phe	Ile Ala Asn Ser Gln	Glu Pro Glu Ile Arg	Leu
140	145		150
Thr Ser Ser Leu	Pro Arg Ser Pro Gly	Arg Ser Thr Glu Asp	Leu
155	160		165
Pro Gly Ser Gln	Ala Thr Leu Ser Gln	Trp Ser Thr Pro Gly	Ser
170	175		180
Thr Pro Ser Arg	Trp Pro Ser Pro Ser	Pro Thr Ala Met Pro	Ser
185	190		195
Pro Glu Asp Leu	Arg Leu Val Leu Met	Pro Trp Gly Pro Trp	His
200	205		210
Cys His Cys Lys	Ser Gly Thr Met Ser	Arg Ser Arg Ser Gly	Lys
215	220		225
Leu His Gly Leu	Ser Gly Arg Leu Arg	Val Gly Ala Leu Ser	Gln
230	235		240
Leu Arg Thr Glu	His Lys Pro Cys Thr	Tyr Gln Gln Cys Pro	Cys
245	250		255
Asn Arg Leu Arg	Glu Glu Cys Pro Leu	Asp Thr Ser Leu Cys	Thr
260	265		270
Asp Thr Asn Cys	Ala Ser Gln Ser Thr	Thr Ser Thr Arg Thr	Thr
275	280		285
Thr Thr Pro Phe	Pro Thr Ile His Leu	Arg Ser Ser Pro Ser	Leu
290	295		300
Pro Pro Ala Ser	Pro Cys Pro Ala Leu	Ala Phe Trp Lys Arg	Val
305	310		315
Arg Ile Gly Leu	Glu Asp Ile Trp Asn	Ser Leu Ser Ser Val	Phe
320	325		330
Thr Glu Met Gln	Pro Ile Asp Arg Asn	Gln Arg	
335	340		

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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 ggtgacaggg ccgtgagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgtgtgcggg gaagagggtg ggcttcaag 1800
 tgtgtgtgtg cagggggtgg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcgtgct ggtgggcatg tgagatgagt gactcccggt gaattgttcc 1900
 acagttgaga ggttgagca ggatgaggga atctgtcac catcaataat 1950
 cacttgtgga gcgccagctc tgcccaagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgctgtgtg catgttccct gtctggtgcc 2050
 cctttgcccg cctctgcaa acctcacagg gtccccacac aacagtgcc 2100
 tccagaagca gccctcgga ggagaggaa ggaataatgg gatggctggg 2150
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 tccaaaacct ccattccct gctgccagcc cctttgccat agcctgattt 2250
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 tgggtctggt ttcttccct cccagagggt cttactgttc cagggtggcc 2350
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<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
 Met Ala Gly Leu Ala Ala Arg Leu Val Leu Leu Ala Gly Ala Ala
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 Ala Leu Ala Ser Gly Ser Gln Gly Asp Arg Glu Pro Val Tyr Arg
 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe
 80 85 90
 His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro
 95 100 105
 Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val
 110 115 120
 Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met
 125 130 135
 Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp
 140 145 150
 Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu
 155 160 165
 Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile
 170 175 180
 Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val
 185 190 195
 Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His
 200 205 210
 Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu
 215 220 225
 Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu
 230 235 240
 Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys
 245 250 255
 Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu
 260 265 270
 Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala
 275 280 285
 Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser
 290 295 300
 Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp
 305 310 315
 Lys Phe Lys Leu Asp
 320

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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gaaggtccgt gactatggct cccagagcc tgccttcac taggatggct 100

cctctgggca tgcgtcttg gctgctgatg gccgcctgct tcacctctg 150

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg		
455	460	

<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

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tcccatttgc ctgtctcgtt caggccccca cccccccttc cacctgacca 200

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tgtgggaggg gcggggagggt tttctataaa ctgtatcatt ttctgctgag 2000
ggtggagtgt cccatccttt taatcaagggt gatttgtatt ttgactaata 2050
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<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

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Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu	
				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
				50					55					60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
				65					70					75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
				80					85					90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
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aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcggnat catcagtggg gtntntctg ttatcaatat ttggctgat 150
gcanttgggc cagggtgtgt tgggatccat ggagactcac cctattant 200
cotganttca gcctttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
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ctgcttaaga aggacagatga ggggttagca tngctgagtg aggacggaag 150
atcaccatt tccatccgcc agatggccta tgtttntggt ntttccttcg 200
gtatcatcag tgggtgtttn tctgttatca atattttggn tgatgcantt 250
gggcagggtg tggttgggat ccatggagan tcaccctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50
tccctttccc cgggtgtctg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac ccacgcgga ctcccagnt gngcgccct tccattttgc 150
ctgtctgtgt caggccccca ccccccttc cactgacca gccattgggg 200
ctgcggtgtt ttctggctgc acttctctgc cgttcggccc ggccttcgct 250

cttttcttga tcaactgtggc tggggaccog cttcgcgta tcatcctggt 300
 cgcaggggca tttttctggc tggctccct gctcctggcc tctgtggtct 350
 ggtcactctt ggtccatgtg accgaccggt cagatgccc gctccagtac 400
 ggctctctga tttttgggtc tgcgtctct gtcctttac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggaaggaa tcacctatc ccatccgcc gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtctct ctgttatcaa 600
 tattttggct gatgcacttg ggccagggtg ggttgggatc catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cgttgccacc ccacgcggac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctggtc aggccccac ccccttccc acctgaccag ccattggggc 200
 tgcggtgttt ttgggctgc acttctgtcg cgttcgggcc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctggtctccc tgctcctggc ctctgtgtgc 350
 tggttcatct tgggtccatg gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttgggt ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggagatga ggggttagca 500
 tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt ggccagggtg tggttgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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 gctgggagca aatccccac cccctacctg ggggacaggg caagtgaac 150
 ctggtgaggg tggtcagca ggcagggaag gagaggtgtc tgtgcgtcct 200
 gcacccacat ctttctctgt cccctccttg cctgtctcgg aggtcgtcag 250
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 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
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 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
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 gcgggggttg cgtctcaatc tccctggggc actttcatcc tcaagctcag 1500
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 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcacatcaaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 gtgctcttcc tgaaccacgc ccacgcgcg ggcacggcgc cccacctgt 200
 cgctcagcact ggggctgcc a gcgccaacag cgccctggtc actgtggaaa 250
 gggcggacag ctgcacactc agcatcctca ttgaccgcg gtccccgac 300
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 ggcgtgtgaca gagcaccagg cccagccacg gctggtgggc gaccaggagc 400
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 gctcagagc tgacagcga gtgcatggg ctgcggaagg ggcattggc 500
 gctgggccag ggcctcagcg ccctgcagag tgagcagggc gcctcatcc 550

agcttctctc tgagagccag ggcacatgg ctcacctggt gaactccgtc 600
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 acatgcgcag 3010

<210> 314

<211> 461

<212> PRT

<213> Homo sapiens

<400> 314

Met	Val	Asn	Asp	Arg	Trp	Lys	Thr	Met	Gly	Gly	Ala	Ala	Gln	Leu
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Glu	Asp	Arg	Pro	Arg	Asp	Lys	Pro	Gln	Arg	Pro	Ser	Cys	Gly	Tyr
			20						25					30
Val	Leu	Cys	Thr	Val	Leu	Leu	Ala	Leu	Ala	Val	Leu	Leu	Ala	Val
			35						40					45
Ala	Val	Thr	Gly	Ala	Val	Leu	Phe	Leu	Asn	His	Ala	His	Ala	Pro
			50						55					60
Gly	Thr	Ala	Pro	Pro	Pro	Val	Val	Ser	Thr	Gly	Ala	Ala	Ser	Ala
			65						70					75
Asn	Ser	Ala	Leu	Val	Thr	Val	Glu	Arg	Ala	Asp	Ser	Ser	His	Leu
			80						85					90
Ser	Ile	Leu	Ile	Asp	Pro	Arg	Cys	Pro	Asp	Leu	Thr	Asp	Ser	Phe
			95						100					105

Ala	Arg	Leu	Glu	Ser 110	Ala	Gln	Ala	Ser	Val 115	Leu	Gln	Ala	Leu	Thr 120
Glu	His	Gln	Ala	Gln 125	Pro	Arg	Leu	Val	Gly 130	Asp	Gln	Glu	Gln	Glu 135
Leu	Leu	Asp	Thr	Leu 140	Ala	Asp	Gln	Leu	Pro 145	Arg	Leu	Leu	Ala	Arg 150
Ala	Ser	Glu	Leu	Gln 155	Thr	Glu	Cys	Met	Gly 160	Leu	Arg	Lys	Gly	His 165
Gly	Thr	Leu	Gly	Gln 170	Gly	Leu	Ser	Ala	Leu 175	Gln	Ser	Glu	Gln	Gly 180
Arg	Leu	Ile	Gln	Leu 185	Leu	Ser	Glu	Ser	Gln 190	Gly	His	Met	Ala	His 195
Leu	Val	Asn	Ser	Val 200	Ser	Asp	Ile	Leu	Asp 205	Ala	Leu	Gln	Arg	Asp 210
Arg	Gly	Leu	Gly	Arg 215	Pro	Arg	Asn	Lys	Ala 220	Asp	Leu	Gln	Arg	Ala 225
Pro	Ala	Arg	Gly	Thr 230	Arg	Pro	Arg	Gly	Cys 235	Ala	Thr	Gly	Ser	Arg 240
Pro	Arg	Asp	Cys	Leu 245	Asp	Val	Leu	Leu	Ser 250	Gly	Gln	Gln	Asp	Asp 255
Gly	Val	Tyr	Ser	Val 260	Phe	Pro	Thr	His	Tyr 265	Pro	Ala	Gly	Phe	Gln 270
Val	Tyr	Cys	Asp	Met 275	Arg	Thr	Asp	Gly	Gly 280	Gly	Trp	Thr	Val	Phe 285
Gln	Arg	Arg	Glu	Asp 290	Gly	Ser	Val	Asn	Phe 295	Phe	Arg	Gly	Trp	Asp 300
Ala	Tyr	Arg	Asp	Gly 305	Phe	Gly	Arg	Leu	Thr 310	Gly	Glu	His	Trp	Leu 315
Gly	Leu	Lys	Arg	Ile 320	His	Ala	Leu	Thr	Thr 325	Gln	Ala	Ala	Tyr	Glu 330
Leu	His	Val	Asp	Leu 335	Glu	Asp	Phe	Glu	Asn 340	Gly	Thr	Ala	Tyr	Ala 345
Arg	Tyr	Gly	Ser	Phe 350	Gly	Val	Gly	Leu	Phe 355	Ser	Val	Asp	Pro	Glu 360
Glu	Asp	Gly	Tyr	Pro 365	Leu	Thr	Val	Ala	Asp 370	Tyr	Ser	Gly	Thr	Ala 375
Gly	Asp	Ser	Leu	Leu 380	Lys	His	Ser	Gly	Met 385	Arg	Phe	Thr	Thr	Lys 390
Asp	Arg	Asp	Ser	Asp 395	His	Ser	Glu	Asn	Asn 400	Cys	Ala	Ala	Phe	Tyr 405
Arg	Gly	Ala	Trp	Trp 410	Tyr	Arg	Asn	Cys	His 415	Thr	Ser	Asn	Leu	Asn 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 315

cacacgtcca acctcaatgg gcag 24

<210> 316

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 316

gaccagcagg gcccaaggaca agg 23

<210> 317

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 317

gttctctgag atgaagatcc ggcgggtccg ggagtaccgc ttag 44

<210> 318

<211> 1841

<212> DNA

<213> Homo sapiens

<400> 318

gcagtcagag acttccccctg ccctcgtctg ggaaagaaca ttaggaatgc 50

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ggcaatccga coacatttca ctctcacgcg ttaggaatc cagatgcagg 150

ccaagtacag cagcacgagg gacatgtctg atgatgatgg ggacaccacc 200

atgagcctcg attctcaagc ctctgccaca actcggcatc cagagccccg 250

gcgcacagag cacagggtct cctcttcaac gtggcgacca gtggccctga 300

ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350

cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaag gaagaaagat taggaaatc gtccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500
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 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319

<211> 280

<212> PRT

<213> Homo sapiens

<400> 319

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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 59, 95, 149, 331, 364, 438, 446
 <223> unknown base

<400> 320
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 cttttgcoac aattoggcac ccagagcccc ggcgcacaga gcacagggnt 150
 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgett 200
 ggtgctgctg atagggctgg cagccctggg gctttgttt ttctagtact 250
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 tttagaaata cgtccaaga gttgcaattt nttcaagtcc agaataataa 350
 gcttgacaga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
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 atacacacac cacttccc 468

<210> 321
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 321
 atgcaggcca agtacagcag cac 23

<210> 322
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 322
 catgctgacg acttctctgca agc 23

<210> 323
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 323
 ccacacagtc tctgcttctt ggg 23

<210> 324
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctg gatg atgatgggga caccacccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

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ggagccagtg caggaggggg accctcattt ccgaagtgcc ctgacagccc 1200
accctgtgcg tgacctgtg cacatgtacc agctgcacaa agctttcgcc 1250
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

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gtccctgcc tttaataaac tggccaagtg tggaaaaa 2988

<210> 326
<211> 775
<212> PRT
<213> Homo sapiens

<400> 326
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35 40 45
Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg
50 55 60
Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly
65 70 75
Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro
80 85 90
Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg
95 100 105
Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu
110 115 120
Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val
125 130 135
Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe
140 145 150
Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Gly Met Ala Val
155 160 165
Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala
170 175 180
Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe
185 190 195
Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala
200 205 210
Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr
215 220 225
Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly
230 235 240
Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu
245 250 255
Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile
260 265 270

Ser Val Gln Thr Ala Ala Pro Ser Pro Leu Arg Leu Met Asp Leu
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 Leu Ser Lys Lys His Pro Leu Asp Thr Leu Phe Leu Leu Ala Gly
 605 610 615
 Pro Asp Thr Val Leu Thr Pro Asp Phe Leu Asn Arg Cys Arg Met
 620 625 630
 His Ala Ile Ser Gly Trp Gln Ala Phe Phe Pro Met His Phe Gln
 635 640 645
 Ala Phe His Pro Gly Val Ala Pro Pro Gln Gly Pro Gly Pro Pro
 650 655 660
 Glu Leu Gly Arg Asp Thr Gly Arg Phe Asp Arg Gln Ala Ala Ser
 665 670 675
 Glu Ala Cys Phe Tyr Asn Ser Asp Tyr Val Ala Ala Arg Gly Arg
 680 685 690
 Leu Ala Ala Ala Ser Glu Gln Glu Glu Leu Leu Glu Ser Leu
 695 700 705
 Asp Val Tyr Glu Leu Phe Leu His Phe Ser Ser Leu His Val Leu
 710 715 720
 Arg Ala Val Glu Pro Ala Leu Leu Gln Arg Tyr Arg Ala Gln Thr
 725 730 735
 Cys Ser Ala Arg Leu Ser Glu Asp Leu Tyr His Arg Cys Leu Gln
 740 745 750
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 755 760 765
 Leu Phe Glu Gln Glu Gln Gly Asn Ser Thr
 770 775

<210> 327
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 327
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 <210> 328
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 328
 ctgatgtggc cgatgttctg 20

 <210> 329
 <211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
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 atggctcagt gtgcagacag 20

 <210> 330
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 330
 gcatgctgct ccgtgaagta gtcc 24

 <210> 331
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 331
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 <210> 332
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 332
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 <210> 333
 <211> 1095
 <212> DNA
 <213> Homo sapiens

 <400> 333
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 gctttttaga agcttgattt cctttgaaga tgaagacta gcggaagctc 200

 tgcctcttcc ccagtgggc gagggaaactc ggggcgattg gctgggaact 250

 gtatccacc aaatgtcacc gatttcttcc tatgcaggaa atgcagacag 300

 ccatcaataa gaaatttctc agcctgggccc aaaatggttg gccccacgaa 350

 gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

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 gattgtcgcg ctgcaccca ctgcagctgc gcacagctgc atttctttcc 500
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<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

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			20						25				30	
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
			35						40				45	
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
			50						55				60	
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
			65						70				75	
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
			80						85				90	
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
			95						100				105	
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
			110						115				120	
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
			125						130				135	
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
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294

<213> Homo sapiens

<400> 339

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aaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly
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Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr Glu	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val Leu Ser Ala Leu Val Pro Ser Met Val Ala Ala Lys Pro Val
470 475 480

Asp Trp Glu Glu Ser Pro Leu Phe Asn Ser Leu Phe Pro Val Ser
485 490 495

Asp Gly Ser Asn Tyr Phe Val Arg Leu Tyr Thr Glu Pro Leu Leu
500 505 510

Val Asn Leu Pro Thr Pro Asp Phe Ser Met Pro Tyr Asn Val Ile
515 520 525

Cys Leu Thr Cys Thr Val Val Ala Val Cys Tyr Gly Ser Phe Tyr
530 535 540

Asn Leu Leu Thr Arg Thr Phe His Ile Glu Glu Pro Arg Thr Gly
545 550 555

Gly Leu Ala Lys Arg Leu Ala Asn Leu Ile Arg Arg Ala Arg Gly
560 565 570

Val Pro Pro Leu

<210> 341
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 341
tggacaccgt accctggtat ctgc 24

<210> 342
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic oligonucleotide probe

<400> 342
ccaactctga ggagagcaag tggc 24

<210> 343
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 343
tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
<211> 762
<212> DNA
<213> Homo sapiens

<400> 344
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 tcacacagac caggactgtc tgggggaaaag gaagtgttg tacctgcact 200
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<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
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 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
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<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

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 attttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

	380		385		390
Arg Leu Ser Gly Ala Leu Ile Lys Gly Tyr Glu Gln Asp Val Gly	395		400		405
Thr Arg Thr Ser Phe Tyr Gly Phe Thr Ala Phe Ser Leu Thr Gln	410		415		420
Ser Leu Leu Ile Leu Gly Asn Arg Gly Phe Lys Asn Val Pro Leu	425		430		435
Gly Lys Asp Val Arg Tyr Leu His Phe Leu Glu Gly Thr Arg Asp	440		445		450
Tyr Glu Trp Leu Glu Ala Leu Leu Met Asn Gln Thr Val Met Ser	455		460		465
Lys Asn Leu Phe Trp Phe Arg His Arg Pro Gln Glu Ala Phe Arg	470		475		480
Glu Ala Leu His Met Asp Arg Tyr Leu Leu Leu His Pro Asp Phe	485		490		495
Leu Arg Tyr Met Lys Asn Arg Phe Leu Arg Ser Lys Thr Leu Asp	500		505		510
Gly Ala His Trp Arg Ile Tyr Arg Pro Thr Thr Gly Ala Leu Leu	515		520		525
Leu Leu Thr Ala Leu Gln Leu Cys Asp Gln Val Ser Ala Tyr Gly	530		535		540
Phe Ile Thr Glu Gly His Glu Arg Phe Ser Asp His Tyr Tyr Asp	545		550		555
Thr Ser Trp Lys Arg Leu Ile Phe Tyr Ile Asn His Asp Phe Lys	560		565		570
Leu Glu Arg Glu Val Trp Lys Arg Leu His Asp Glu Gly Ile Ile	575		580		585
Arg Leu Tyr Gln Arg Pro Gly Pro Gly Thr Ala Lys Ala Lys Asn	590		595		600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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agtgcacgaa acacttccat agactttatc acâacaccag agactgcacc 200

attcctgcata actataaaag atgcgccagg cttcttacc ggctggctgt 250

cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300

accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

ctttatacac atccctcat ggacaagaga tttatttttg cagacagact 400
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 tattcgataa atcagtgtag ttgacagtgt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
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 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
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 ttctctggga ggcccgaacc cggccgcgcc cagccccac catgccacc 100
 gcgggggtccc gccgggccc gcgcctcacc gcaatcgctc tgttggtgct 150
 gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt cacctctgc 250
 tgcgggacct gctaccatcg gtactgtgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctccagctgtg atcctctttt ttgctgtggt tgccaccacc 400
 atctgtgctt tcctctgttc ctgttgctac ctgtaccgcc ggcgcacga 450
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 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900
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<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
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 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp
 20 25 30
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe
 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
 155 160 165
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
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ctcaaatggt cccttgcaac catgtcattt ctactttcct cactgttggc 150
tctottaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttctc 250
gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400
accctcagga agggagctgg agagaggcta tcggaagaac ccctgcagggt 450
cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500
tcottgtcgg gctcccgtac acagtgtgca ttcactatgc tggcaatctt 550
tcggagactt tcoacggatt ttacaaaagc acctacagaa ccaaggaagg 600
ggaactgagg atactagcat caacacaatt tgaacccact gcagctagaa 650
tggcctttcc ctgctttgat gaacctgcct tcaaaagcaag tttctcaatc 700
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gaaatctgtg actgttgctg aaggactcat agaagaccat tttgatgtca 800
ctgtgaagat gagcacctat ctgggtggcct tcatcatttc agattttgag 850
tctgtcagca agataacca gagtgaggtc aaggtttctg tttatgtctg 900
gccagacaag ataaatcaag cagattatgc actggatgat ggggtgactc 950
ttctagaatt ttatgaggat tatttcagca tacogtatoc cctaccocaaa 1000
caagatcttg ctgctattcc cgacttcoag tctggtgcta tggaaaaactg 1050
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
cttotgcac aagtaagctt ggcacacag tgactgtggc ccatgaactg 1150
gccaccaggt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
ttggctaaat gaaggatttg ccaaatttat ggagtttggg tctgtcagtg 1250
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gacgcaatgg aggtagatgc tttaaattcc tcacacctgt tgtctacacc 1350
 tgtggaatat cctgctcaga tccgggagat gtttgatgat gttttattatg 1400
 ataagggagc ttgtattctg aatatgctaa gggagtatct tagcgctgac 1450
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 taaaaaaac gaggacctgt gggatagtat ggcaagtatt tgcctacag 1550
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 tcctcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650
 cacttgaca ctgcagaggg gttttccctc aataaccatc acagtgaggg 1700
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 gcccggaca ctgggtacct gtggcatggt ccattgacat tcataccag 1800
 caaatcaac atggtccatc gatttttgct aaaaacaaaa acagatgtgc 1850
 tcctcctccc agaagagggt gaatggatca aatttaagt gggcatgaat 1900
 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950
 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
 tcattaacaa tgcatttcag ctgcgcagca ttgggaagct gtccattgaa 2050
 aaggccttgg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100
 cgtgtttcaa ggttggaatg agctgattcc tatgtataag ttaatggaga 2150
 aaagagatat gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200
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 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
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 togtaccat gtgttttggt catcacagt gttgccctgc aacgtaaacc 3150
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 aaaaaaaaa aaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
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 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

215	220	225
Thr Val Ala Glu Gly Leu Ile Glu Asp	His Phe Asp Val Thr Val	
230	235	240
Lys Met Ser Thr Tyr Leu Val Ala Phe	Ile Ile Ser Asp Phe Glu	
245	250	255
Ser Val Ser Lys Ile Thr Lys Ser Gly	Val Lys Val Ser Val Tyr	
260	265	270
Ala Val Pro Asp Lys Ile Asn Gln Ala	Asp Tyr Ala Leu Asp Ala	
275	280	285
Ala Val Thr Leu Leu Glu Phe Tyr Glu	Asp Tyr Phe Ser Ile Pro	
290	295	300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala	Ala Ile Pro Asp Phe Gln	
305	310	315
Ser Gly Ala Met Glu Asn Trp Gly Leu Thr	Thr Tyr Arg Glu Ser	
320	325	330
Ala Leu Leu Phe Asp Ala Glu Lys Ser	Ser Ala Ser Ser Lys Leu	
335	340	345
Gly Ile Thr Val Thr Val Ala His Glu	Leu Ala His Gln Trp Phe	
350	355	360
Gly Asn Leu Val Thr Met Glu Trp Trp	Asn Asp Leu Trp Leu Asn	
365	370	375
Glu Gly Phe Ala Lys Phe Met Glu Phe	Val Ser Val Ser Val Thr	
380	385	390
His Pro Glu Leu Lys Val Gly Asp Tyr	Phe Phe Gly Lys Cys Phe	
395	400	405
Asp Ala Met Glu Val Asp Ala Leu Asn	Ser Ser His Pro Val Ser	
410	415	420
Thr Pro Val Glu Asn Pro Ala Gln Ile	Arg Glu Met Phe Asp Asp	
425	430	435
Val Ser Tyr Asp Lys Gly Ala Cys Ile	Leu Asn Met Leu Arg Glu	
440	445	450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser	Gly Ile Val Gln Tyr Leu	
455	460	465
Gln Lys His Ser Tyr Lys Asn Thr Lys	Asn Glu Asp Leu Trp Asp	
470	475	480
Ser Met Ala Ser Ile Cys Pro Thr Asp	Gly Val Lys Gly Met Asp	
485	490	495
Gly Phe Cys Ser Arg Ser Gln His Ser	Ser Ser Ser Ser His Trp	
500	505	510
His Gln Glu Gly Val Asp Val Lys Thr	Met Met Asn Thr Trp Thr	
515	520	525
Leu Gln Arg Gly Phe Pro Leu Ile Thr	Ile Thr Val Arg Gly Arg	

530	535	540
Asn Val His Met Lys Gln Glu His Tyr	Met Lys Gly Ser Asp Gly	
545	550	555
Ala Pro Asp Thr Gly Tyr Leu Trp His	Val Pro Leu Thr Phe Ile	
560	565	570
Thr Ser Lys Ser Asn Met Val His Arg	Phe Leu Leu Lys Thr Lys	
575	580	585
Thr Asp Val Leu Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys Phe	
590	595	600
Asn Val Gly Met Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp Asp	
605	610	615
Gly Trp Asp Ser Leu Thr Gly Leu Leu	Lys Gly Thr His Thr Ala	
620	625	630
Val Ser Ser Asn Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe Gln	
635	640	645
Leu Val Ser Ile Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp Leu	
650	655	660
Ser Leu Tyr Leu Lys His Glu Thr Glu	Ile Met Pro Val Phe Gln	
665	670	675
Gly Leu Asn Glu Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys Arg	
680	685	690
Asp Met Asn Glu Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile Arg	
695	700	705
Leu Leu Arg Asp Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu Gly	
710	715	720
Ser Val Ser Glu Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu Ala	
725	730	735
Cys Val His Asn Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly Tyr	
740	745	750
Phe Arg Lys Trp Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro Val	
755	760	765
Asp Val Thr Leu Ala Val Phe Ala Val	Gly Ala Gln Ser Thr Glu	
770	775	780
Gly Trp Asp Phe Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser Ser	
785	790	795
Thr Glu Lys Ser Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln Asn	
800	805	810
Lys Glu Lys Leu Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly Asp	
815	820	825
Lys Ile Lys Thr Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile Gly	
830	835	840
Arg Asn Pro Val Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg Lys	

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860	865			870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875	880			885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890	895			900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905	910			915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
	920	925			930
Val Trp Leu Gln	Ser Glu Lys Leu Glu Arg Met				
	935	940			

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
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 tcatcctccc actgccagga gtgcaggcgc tgctctgcc gtttgggaca 100
 gttcagcatg tgtggaaggt gtccgacct ccccggaat ggacctctaa 150
 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgtcca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaaaggacc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgatc tcctacacct togtgtgccg ccaggaggac ttctgcaaca 350
 acctcgttaa ctccctcccg ctttggggcc cacagccccc agcagaccca 400
 ggatccttga ggtgccagct ctgcttgtct atggaaggct gcttgagggg 450
 gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
 tcctcaggct cagggggagga ggcactctct ccaatctgag agtccaggga 550
 tgcatgcccc agccagggtg caacctgtct aatgggacac aggaaattgg 600
 gcccggtggg atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
 atcgggggac caccattatg acacacggaa acttggctca aagaccact 700
 gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctggtgggga 800
 caaaaggctg cagcactgtt ggggctcaaa attccagaa gaccaccatc 850
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[illegible]

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<210> 356
<211> 1238
<212> DNA
<213> Homo sapiens
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<400>	356
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tcagcctggc	cttctctgtca ctgctgccat ctggacatcc tcagccggct 150
ggcgatgacg	cctgctctgt gcagatccct gtccctggcc tcaaagggga 200
tgcgggagag	aagggaagaca aagcgcgcc cggacgcctt ggaagagtcg 250
gccccacggg	agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300
gtgggtcgtc	atggaaaaat tggtcaccat ggctctaaag gtgagaaaag 350
agattccggg	gacataggac cccctggctc taatggagaa ccaggcctcc 400
catgtgagtg	cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
gtctctcagc	tgaccagcga gctcaaggto atcaagaatg ctgtcgccgg 500
tgtgcgcgag	acggagagca agatctacct gctggtgaag gaggagaagc 550
gctaagcgga	cgcccagctg tctgcccagg gcgcgggggg caecgtgagc 600
atgcccaagg	acgaggctgc caatggcctg atggccgcac acctggcgca 650
agccggcctg	gcccgtgtct tcatacgcat caacgacctg gagaaggagg 700
gcgccttcgt	gtactctgac cactcccca tcgggacctt caacaagtgg 750
cgcagcggtg	agcccaacaa tgctacgac gaggaggact gcgtggagat 800
ggtggcctcg	ggcggttgga acgacgtggc tgcgccacac acctgtact 850
tcattgtgtg	gtttgacaag gagaacatgt gaggctcagg ctggggctgc 900
ccattggggg	cccacatgt cctgcaggg ttggcaggga cagagcccag 950
accatggtgc	cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
tgagtagagg	gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
aaaatgaaag	gtgtcctggg gtgctgtctc tgaagaagca gagtttcatt 1100
acctgtattg	tagccccaat gtcattatgt aattattacc cagaatttgt 1150
cttcataaaa	gcttgtgcct ttgtccaagc tatacataaa aatctttaag 1200
tagtgacgta	gttaaagcca aaaaaaaaaa aaaaaaaaaa 1238

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<210> 357
<211> 271
<212> PRT
<213> Homo sapiens
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				50					55					60	
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	
				65					70					75	
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	
				80					85					90	
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	
				95					100					105	
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	
				110					115					120	
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	
				125					130					135	
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	
				140					145					150	
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	
				155					160					165	
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	
				170					175					180	
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	
				185					190					195	
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	
				200					205					210	
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	
				215					220					225	
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	
				230					235					240	
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	
				245					250					255	
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	
				260					265					270	

Met

<210> 358
 <211> 972
 <212> DNA
 <213> Homo sapiens

<400> 358
 agtgactgca gccttctag atccccctcca ctccgtttct ctctttgcag 50
 gaggcaccgc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100
 gttctctgat cctgccagac caccagagccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggagggtgtt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
 gagactcttc aaaagccaact catctctgga gggattgtct aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctcccg gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gagggttcct cgcccccttc 500
 atcccaatca gcttgatcc acaggaaagt ctccctggg aacagaggag 550
 cagagacctt tataagactc tctacggat gtgaatcaag agaagctccc 600
 cagctttggc atctcaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 cagggtgcga cgctcctgtt accctttctc ttcctgttgc ttgtaacatt 750
 cttgtgcttt gactccttct ccatcttttc tacctgaccc tgggtgtgaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 cttaggttcc tgtagtgtcc tacattaaaa atataatgct tctctctatt 900
 cctcaacaat aaaggatttt tgcataatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 359
 Met Arg Ile Met Leu Leu Phe Thr Ala Ile Leu Ala Phe Ser Leu
 1 5 10 15
 Ala Gln Ser Phe Gly Ala Val Cys Lys Glu Pro Gln Glu Glu Val
 20 25 30
 Val Pro Gly Gly Arg Ser Lys Arg Asp Pro Asp Leu Tyr Gln
 35 40 45
 Leu Leu Gln Arg Leu Phe Lys Ser His Ser Ser Leu Glu Gly Leu
 50 55 60
 Leu Lys Ala Leu Ser Gln Ala Ser Thr Asp Pro Lys Glu Ser Thr
 65 70 75
 Ser Pro Glu Lys Arg Asp Met His Asp Phe Phe Val Gly Leu Met
 80 85 90
 Gly Lys Arg Ser Val Gln Pro Glu Gly Lys Thr Gly Pro Phe Leu
 95 100 105
 Pro Ser Val Arg Val Pro Arg Pro Leu His Pro Asn Gln Leu Gly
 110 115 120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
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gcctgctgtg cccgcgctgt cgcgctgct accgcgtctg ctggacgcgg 100
gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtctgggtg gtgtcatccc cttggggctg 250
ctgttctcgg tctgggac ccaaggctac ctctcgcca acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactcccg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgtcgac 400
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatgctt ggctcagggt ctctctggc aggggaggat ccggtctctg 600
ttctgttttg ttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgca atggcacaat cgtcatgccc tgaacacctt gactcccg 700
gttaagcgat cctgcttoag cctcccaagt agctggaact acaggcatgc 750
accatgtgtc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
ctacgttgcc caggctggtc ttgaactcct aggtcgaagc aatcctcctg 850
cctcagcctc tcaaagtgtc aggtattatg gcatgagtca ccctgtctgg 900
ctctggctct gttcttaaca ttctgcaaaa acaacacacg tgggttcctc 950
gtgcagagcc tgctctgtt ccttcatgtc actcttggtg gtccactgg 1000
gaacacagct ctccgcttt cccacctgga ggcagagtgg ggagggggcc 1050
agggtgggc ttgtctgat ctgatctcag ctgtgccaca cgctagctgc 1100
accaccctga cttctcctta gcccggtgtg gcctcacttt ccacttgag 1150
agtccttctc cgcgtggtt ccatgactgt gagataagtc gaggtgtgta 1200
aggggccggc acagactgac ctgcctcccc aaccctagg ctttgctaac 1250
cgggaaagga gctaacgggt acagaagaca gccaaagtca accctcccg 1300
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

cccaagctcc agtgtggaac cttccttcct ggctgggttt ccagaactac 1400
 agaggaatag accacagtct tccagggtcc ctctcgtcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cactgccag cctgggtaac atggtaaagc cccgtctcta caaaaaatc 1550
 caagttagcc gggcatgggt gtgcgcacct gtagtccag ctgcagtggt 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgagc 50

ggccactatg gggctctgggc tgcccccttgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggc cggggtatga ctttgcaact gaagctgaag 150
gagtcctttc tgacaaatcc ctccatgatg tccagcttcc tggaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcagggacc agcgtcacc 250
tccaccatgc aagatctcaa caccatgttg totgcaaac atgacagcca 300
ttgaagcctg tgtcctctct ggcccgggct tttgggcccgg ggatgcagga 350
ggcaggcccc gacctgtct ttcagcaggc ccccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75
Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
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ctttctgagt ttcaaaaaca acagactagt actctaaaga actctttaaa 100
acaattaaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgtctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttccctccccc ctccgattgt tctaaataat tgaagatgt ctgctgtgga 350
aaaaggcatg tatttaaatc tgatgatctc tcaacctctc ttagtgtgga 400
aaggctcctg aaagccaatg gaaatacttt tttttttctt tggcactaat 450

caagtgaagt ttaccttttc acttagtagg atgtgttggt acgctagtaa 500
aatagaaacc tgtgtttatt ctcaaggatt tttagaacaac cagccatcat 550
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600
gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
ttgttgtaat agcctttgaa attacagta ctgtctctct actatcttca 750
gattacttga ttcaataaaa ccaattatgt ttgtaattga tattaataaa 800
accagaataa aagttcatat ctaccc 826

<210> 365
<211> 67
<212> PRT
<213> Homo sapiens

<400> 365
Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
1 5 10 15
Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
20 25 30
Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
35 40 45
Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
50 55 60
Leu Pro Ser Asp Cys Ser Lys
65

<210> 366
<211> 2475
<212> DNA
<213> Homo sapiens

<400> 366
gaggatttgc cacagcagcg gatagagcag gagagcacca ccggagccct 50
tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctgtgtct 150
gttccttgca gcttttctgc cccgcgcgca gtgtaccag gaccagacca 200
tgggtcatta catctaccag cgccttcgag tcttgagca agggctggaa 250
aaatgtacc aagcaacgag ggcatacatt caagaattcc aagagttctc 300
aaaaatatata tctgtcatgc tgggaagatg tcagacctac acaagtga 350
acaagatgac agtgggtaac ttggcactga gagggtgaac tgccaacgg 400
gagattgact acatacaata ccttcgagag gctgacgagt gcatcgtatc 450
agaggacaag acactggcag aaatgttgct ccaagaagct gaagaagaga 500

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaagtgaa aagatacagc tagaaaatac tacaatatcc atagtttttc 2200
 cattgcccaa ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcacgttttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagtttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtccta agggtaggga ccccaactct agcctcctct 2400
 tgtcttgctg tcctctgttt ctctctttct gctttaaatt caataaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
 215 225
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 250 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile
 260 265 270
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly
 275 280 285
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly
 290 295 300
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln
 305 310 315
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val
 320 325 330
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr
 335 340 345
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe
 350 355 360
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro
 365 370 375
 Arg Asp Lys Gln Leu Tyr Ala Trp Asn Glu Gly Asn Gln Ile Ile
 380 385 390
 Tyr Lys Leu Gln Thr Lys Arg Lys Leu Pro Leu Lys
 395 400

<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

gggcgccgc gtactcacta gctgaggtgg cagtgggtcc accaacatgg 50
 agctctcgca gatgtcggag ctcattggggc tgcgtgtgtt gcttggggtg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc ccgcctgccaaa aaaagcaaat ggatttcac 200
 ctgacaaaac ttctgggatcc aagaagcaga aacaatatca gcggtattcg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcotcc tggctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tcctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag ccctgactgc agagccttca 500
tcgtctggct ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550
cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600
aaagcacaag gcgcctgtca togacattgg cattgtcaac acagggaagt 650
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ggtaacatgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750
tgctgtatct cctctgtggc gatttgtagc ctctgtgtgc ttaccccag 800
atgtgaaggt ttgggaagtc tgctttggaa agaaggggga gttccaggag 850
gtggtgcgag ccttcgaact aaaggggccac tccgcggctg tgcaactcgt 900
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catgaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
tacttctgta agacaggccg ctttgaagag gcggcgggtg ccgcgccctg 1050
ccgcctggcc ctctccccc acgcccagggt cttggccttg gcagatggca 1100
gtagtattca tctctacaat acccggcggg gcgagaagga ggagtgtttt 1150
gagcgggtcc atggcgagtg tatcgccaac ttgtccttgg acatcactgg 1200
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ctcctggcca ccgagccatg gtggaggaga tgcagggcca cctgaagcgg 1300
gcctccaacg agagaccocg ccagaggctg cagcagcagc tgaccaggcc 1350
ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
ctgcacatct tcctcccagg tggaaagcctt tcagaaggag tctcctgggt 1500
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gtgcttttct tcctcccagg ccagtggggt ggaatctgtc cccacctggc 1650
actgaggaga atggtagaga ggagaggaga gagagagaga atgtgatttt 1700
tggccttctg gcagcacatc ctcacacca aagaagtttg taaatgttcc 1750
agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
ctaagggatt tccttctggg cctcagttct atttgaaga tggagaataa 1900
tcctctctgt gaactccttg caaagatgat atgaggctaa gagaatatca 1950
agtccccagg tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000
gtcatgaaa tggtaaaagt gggaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
 tatatgggtt ggacttctct cttcgggaga tgatatcttg ttaaggaga 2150
 cctcttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
 cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu
1				5					10					15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly
				20					25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
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 ccacgcgagt ctcaatcatg etcctcctag taactgtgtc tgactgtgtct 150
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttcgagggct gcggatgtgc accccgctgg 250
 ggcggaagcg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300
 aggaaacgca agcaccacac ctgtccttgc ttgcccaacc tgctgtgtct 350
 caggttcccc gacggcaggt accgctgtct catggacttg aagaacatca 400

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro
80 85 90

Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe
95 100 105

<210> 372

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 372

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gaaatgtctt tcctccagga cccaagtctt ttaccattgg ggaatgtggtc 100
cattggtgca ggagccctgg gggctgctgc ctggcattgg ctgcttgcca 150
acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtaacctg 200
gaggatatag acctgaaaao actggagaag gaaccaagga ctttcaaagc 250
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 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
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 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
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 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
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 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

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<211> 90
<212> PRT
<213> Homo sapiens

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20 25 30
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35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
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Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
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<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

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 ccagaagatg aaaaaataat tgaacaaata gaggatattg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
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Ser	Met	Gly	Gly	Lys	320	Asp	Arg	Leu	Asn	Arg	Met	Asn	Gln	Ala	Ala	330
Lys	His	Phe	Leu	Leu	335	Gln	Thr	Val	Glu	Asn	Gly	Ser	Trp	Val	Gly	345
Met	Val	His	Phe	Asp	350	Ser	Thr	Ala	Thr	Ile	Val	Asn	Lys	Leu	Ile	360
Gln	Ile	Lys	Ser	Ser	365	Asp	Glu	Arg	Asn	Thr	Leu	Met	Ala	Gly	Leu	375
Pro	Thr	Tyr	Pro	Leu	380	Gly	Gly	Thr	Ser	Ile	Cys	Ser	Gly	Ile	Lys	390
Tyr	Ala	Phe	Gln	Val	395	Ile	Gly	Glu	Leu	His	Ser	Gln	Leu	Asp	Gly	405
Ser	Glu	Val	Leu	Leu	410	Leu	Thr	Asp	Gly	Glu	Asp	Asn	Thr	Ala	Ser	420
Ser	Cys	Ile	Asp	Glu	425	Val	Lys	Gln	Ser	Gly	Ala	Ile	Val	His	Phe	435
Ile	Ala	Leu	Gly	Arg	440	Ala	Ala	Asp	Glu	Ala	Val	Ile	Glu	Met	Ser	450
Lys	Ile	Thr	Gly	Gly	455	Ser	His	Phe	Tyr	Val	Ser	Asp	Glu	Ala	Gln	465
Asn	Asn	Gly	Leu	Ile	470	Asp	Ala	Phe	Gly	Ala	Leu	Thr	Ser	Gly	Asn	480
Thr	Asp	Leu	Ser	Gln	485	Lys	Ser	Leu	Gln	Leu	Glu	Ser	Lys	Gly	Leu	495
Thr	Leu	Asn	Ser	Asn	500	Ala	Trp	Met	Asn	Asp	Thr	Val	Ile	Ile	Asp	510
Ser	Thr	Val	Gly	Lys	515	Asp	Thr	Phe	Phe	Leu	Ile	Thr	Trp	Asn	Ser	525
Leu	Pro	Pro	Ser	Ile	530	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met	540
Glu	Asn	Phe	Thr	Val	545	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser	555
Ile	Pro	Gly	Thr	Ala	560	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln	570
Ala	Lys	Ala	Asn	Pro	575	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg	585
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Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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				20					25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					40					45
Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					55					60
Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					70					75
Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					85					90

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
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Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
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Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
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Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

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<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaagggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

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<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

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gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150

ctcttccaa cagtggtagc tttctccatg agaaaagttc ccaacagaga 200

agcaacagaa atttcccatg tctactttg caatgtaacc cagaggggat 250

cattctggtt tgtggttaca gaccttcaa aaaatcacac cttctctgct 300

gttgaggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350

cttctttcta aatgaccaa ctctggaatt tttaaaaatc cttccacac 400

ttgcaccacc catggaccca tctgtgccca totggattat tatatttggt 450

gtgatatttt gcatcatcat agttgcaatt gcaactactga ttttatcagg 500

gatctggcaa cgtagaagaa agaacaaga accatctgaa gtggatgacg 550

ctgaagataa gtgtgaaaac atgatcaca ttgaaaatgg catcccctct 600

gateccctgg acatgaagg gggcatatta atgatgcctt catgacagag 650

gatgagaggg tcacccctct ctgaagggtt gttgttctgc ttcotcaaga 700

aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750

gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800

tgtgcttgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850

tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900

tagtgtataa atgtggtcat gtggtatttg tagttattga ttaagcatt 950

tttagaataa agatcaggca tatgtatata ttttcacat tcaagacot 1000

aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050

tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100

actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150

tgggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200

gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
 agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 387
 Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu
 1 5 10 15
 Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
 20 25 30
 Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
 35 40 45
 Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
 50 55 60
 Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
 65 70 75
 Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
 80 85 90
 Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
 95 100 105
 Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
 110 115 120
 Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
 125 130 135
 Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
 140 145 150
 Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
 155 160 165
 Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
 170 175 180
 Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
 185 190 195
 Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
 200 205 210
 Pro Ser

<210> 388
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 388
 aactcaaaact cctctctctg ggaaaaacgcg gtgcttgcctc ctcccgagat 50

Ile Gln Leu Thr Ala Leu Trp Pro Ile Ala Ala Val Glu Ile Tyr
 20 25 30
 Thr Ser Arg Val Leu Glu Ala Val Asn Gly Thr Asp Ala Arg Leu
 35 40 45
 Lys Cys Thr Phe Ser Ser Phe Ala Pro Val Gly Asp Ala Leu Thr
 50 55 60
 Val Thr Trp Asn Phe Arg Pro Leu Asp Gly Gly Pro Glu Gln Phe
 65 70 75
 Val Phe Tyr Tyr His Ile Asp Pro Phe Gln Pro Met Ser Gly Arg
 80 85 90
 Phe Lys Asp Arg Val Ser Trp Asp Gly Asn Pro Glu Arg Tyr Asp
 95 100 105
 Ala Ser Ile Leu Leu Trp Lys Leu Gln Phe Asp Asp Asn Gly Thr
 110 115 120
 Tyr Thr Cys Gln Val Lys Asn Pro Pro Asp Val Asp Gly Val Ile
 125 130 135
 Gly Glu Ile Arg Leu Ser Val Val His Thr Val Arg Phe Ser Glu
 140 145 150
 Ile His Phe Leu Ala Leu Ala Ile Gly Ser Ala Cys Ala Leu Met
 155 160 165
 Ile Ile Ile Val Ile Val Val Val Leu Phe Gln His Tyr Arg Lys
 170 175 180
 Lys Arg Trp Ala Glu Arg Ala His Lys Val Val Glu Ile Lys Ser
 185 190 195
 Lys Glu Glu Glu Arg Leu Asn Gln Glu Lys Lys Val Ser Val Tyr
 200 205 210
 Leu Glu Asp Thr Asp
 215

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctgaggcca gacg 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gacg 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
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 agcagtcctg gtactcttgg gagtttccat cttctgtgtc tctgccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa cactgcgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tctgtgatt toatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatcagt ttattttcct tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Thr Thr Thr Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gtccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
cagggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gccccaagg aagtgggtcc 50
aacccttgac ccctaggggt ctggatttgc tggttaacaa gataaactga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gaetccagcc cttgtttacc gagaggacac 250
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagtctctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagctcca ggggtggggg cggcaaactc cataaagaac cagagggtct 400
gggccccggc cacagagtca tctgcccagc tcctctgctg ctggccagtg 450
ggagtgccac gaggtggggc tttgtgcoag taaaaccaca ggctggattt 500
gctcggggc catggtcctt gtctagggca gcaattctca acctctcttg 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggcggggca cgggtgctca cgccgtgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccagg aggcggagct tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
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 1 5 10
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu 30
 20 25
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly 45
 35 40
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg 60
 50 55
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg 75
 65 70
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn 90
 80 85
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu 105
 95 100
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln 120
 110 115

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
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 ccggcctgcc tcagcggccc ccatggggcg ccagaaactg gcacagcatg 100
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 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 gggggccggg tgacagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
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tagaagtcca gctgaggagc gcttggtggtg gccctgccta ccgagaattt 450
 gaggtctctaa aggctcacgc tgacaagcag agccacatcc tatgggcct 500
 cacaggccac gtgcagcggc agaggcgga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgccttg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccctgtg caggaggagg ctgcctgttc actgggatca 700
 gccagggcgc cgggcccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccatc tggggagggg tggaggaagg 800
 acatgtacc tttcatgctt acacaccctt cattaagaca ggtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
 1 5 10 15
 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
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 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccagcc 100
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 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtc 200
 tgccttgaag gaaattcaag ccttcgacag agtctgtctc cgaggcacta 250
 aagttcacaa gaaatgttac ctgtcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg cctcccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggc cacggaaggc 450
 aagtttgttg acgtcaacgg aatcgctatc tccttctctc actgggacgc 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtgcgacgag caagagatag 600
 atatgcgagt tcacatccc taaataggtc ttctctccat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt ttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
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 gataaaatgg cttctgctaa acagactaaa atcttctctc ctagtcttcc 900
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 aggtgtcata taatccaaaa acttttcagc ctgttgtctc ttctgtccca 1100
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 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
 accctaagcg atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acatttattt tgcttttagca tccttactct caccttttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500
 ttttttttag catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttgaa aattgcatac 1600
 gtctgtgcaa ttttttatc tgcttagtgc tattotgctt gtttaactag 1650
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 ottcaaataa atagtgttta aacattgaat gtgtttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu	
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Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr	
				20					25					30	
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg	
				35					40					45	
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu	
				50					55					60	
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr	
				65					70					75	
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala	
				80					85					90	
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile	
				95					100					105	
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile	
				110					115					120	
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn	
				125					130					135	
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe	
				140					145					150	
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg	

	155		160		165									
Ala	Gln	Pro	Asn	Gly	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser
			170					175						180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser	Ser
			185					190						195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys				
			200					205						

<210> 404

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 404

octggtatc cccaggaact ccgac 25

<210> 405

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 405

ctcttgctgc tgcgacaggc ctc 23

<210> 406

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 406

cgccctccaa gactatggta aaaggagcct gccagggtgc aatgac 46

<210> 407

<211> 570

<212> DNA

<213> Homo sapiens

<400> 407

gcgaggaccg ggtataagaa gcctcgtggc cttgccggg cagccgcagg 50

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tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcgcgga 200

ggcgggggcc gggaccctgg ccaacccct cggcacctc aaccctctga 250

agctctctgt gagcagcctg ggcctccccc tgaaccacct catagagggc 300

tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gcctctgtgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggtcta 450
 aaaccccgcc gcggggagga ccgtccatcc ccttccccgc gccctctcta 500
 ataacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
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Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val
				80					85					90
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly	
				95					100					

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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 ggccccagat cctcagtgcg cagagacccc agccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccgtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagctt gccaaaggaga cttcaaaactt cggattcagc ctgtgcgcaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtccc acttgagggc cctgaagccc accaagcccg 500

ggctcctgcc ttccctcttt aagggaactca gagagaccct ctcccgcaac 550
 ctggaactgg gcctctcaca ggggagtttt gccttcatcc acaaggattt 600
 tgatgtcaaa gagactttct tcaattttat caagagggtat ttgtatcacg 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
 tgagattaat cctgaaacca aattaattct tgtggattac atctgtttca 800
 aagggaatg gttgacccca ttgacctg tcttcaccca agtcgacact 850
 ttccacctgg acaagtacaa gaccattaag gtgcccatga tgtacggtgc 900
 aggcaagtgt gcctccacct ttgacaagaa ttttcgtgt catgtcctca 950
 aactgcctca ccaagggaat gccaccatgc tgggtgtcct catggagaaa 1000
 atgggtgacc acctgcctt tgaagactac ctgaccacag acttggtgga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt tctttccga 1100
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 ggaatcagaa gaatcttctc accctttgct gaccttagtg aactctcagc 1200
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 cccagcagat gcctgaaaag gtggacagt ctgaacctta tatatattt 1650
 ttctacacaa tacataccta tgataaagtt taattataa attaggcaca 1700
 gtaagagatt aacaataata acaacattaa gtaaaatgag ttaactgaac 1750
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 aagtactca tgggcgagga gcatagacag tgtggagaca ttgggcaagg 1850
 ggagaattca catcctgggt gggacagagc aggacgatgc aagattccat 1900
 cccactactc agaatggcat gctgcttaag acttttagat tgtttatttc 1950
 tggaattttt catttaatgt ttttggacca tggttgacca tggtaactg 2000
 agactgcaga aagcaaaacc atggataagg gagactact aaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 411
 ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50
 cccagacatg aggaggctcc tcttggtcac cagcctggtg gttgtgctgc 100
 tgtggggagge aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct gggggccccc 200
 tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggccccca tccttcagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggccgt gtctcgagtc ccgagccga ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgc cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc tacctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412
<211> 151
<212> PRT
<213> Homo sapiens

<400> 412
Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15
Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30
Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45
Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60
Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75
Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90
Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105
Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120
Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135
Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150
Gln

<210> 413
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 413
agaaagctgc actctgttga gctccagggc gcagtgagg gagggagtga 50
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tgaggatagc atgaggctaa tacttacttc aaggaatgga cctgttcttc 200
gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagacctctt gtgacatgac ctctgggggt ggcggtgga ccttggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaact acaacacctt tggatctgca gagcgggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggcacgtgcc caataagtc cccatgcagc actggagaaa cagctcccctg 600
 ctgaggtacc gcacggacac tggcttcttc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atgtggagaa gaaagtgtt 700
 ggactgacaa cgccccgtg atccctgtg tctatgattt tggcgagccc 750
 cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggatgta aactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctggtttt gattggagtg gatatggaac tcatgttggg tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccagacc tctctccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaaaaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 414
 Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
 1 5 10 15
 Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
 20 25 30
 Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
 35 40 45
 Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
 50 55 60
 Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
 65 70 75
 Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
 80 85 90
 Arg Gly Lys Cys Thr Val Gly Asp Arg Trp Ser Ser Gln Gln Gly
 95 100 105
 Ser Lys Ala Asp Tyr Pro Glu Gly Asp Gly Asn Trp Ala Asn Tyr
 110 115 120
 Asn Thr Phe Gly Ser Ala Glu Ala Ala Thr Ser Asp Asp Tyr Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	
245	250	255
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu	Leu Phe Tyr Arg	
305	310	

<210> 415

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 415

gcggagccgg cgccggctgc gcagaggagc cgctctcgcc gccgccacct 50

cggtctggag cccacgaggc tgccgcctcc tgcctcgga acaatgggac 100

tcggcgcgcg aggtgcttgg gccgcgctgc tcttggggag gctgcagggtg 150

ctagcgctgc tgggggccc ccatgaaagc gcagccatgg cggtcatctgc 200

aaacatatag aattctgggc ttccacacaa ctccagtgt aactcaacag 250

agactctcca acatgtgcct tctgaccata caaatgaaac ttccaacagt 300

actgtgaaac caccaacttc agttgcctca gactccagta atacaacggt 350

caccaccatg aaacctacag cggtcatctaa tacaacaaca ccagggtatg 400

tctcaacaaa tatgacttct accaccttaa agtctacacc caaaacaaca 450

agtgtttcac agaacacatc tcagatatca acatccacaa tgaccgtaac 500

	125		130		135
Thr His Asn Ser Ser Val Thr Ser Ala Ala Ser Ser Val Thr Ile	140		145		150
Thr Thr Thr Met His Ser Glu Ala Lys Lys Gly Ser Lys Phe Asp	155		160		165
Thr Gly Ser Phe Val Gly Gly Ile Val Leu Thr Leu Gly Val Leu	170		175		180
Ser Ile Leu Tyr Ile Gly Cys Lys Met Tyr Tyr Ser Arg Arg Gly	185		190		195
Ile Arg Tyr Arg Thr Ile Asp Glu His Asp Ala Ile Ile	200		205		

<210> 417
 <211> 1728
 <212> DNA
 <213> Homo sapiens

<400> 417
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 gccgggagcc ggtcgcgagg gctccgggct gtgggaccgc tgggcccaca 100
 gcgatggcga cctgtgaggg aggccttctt cggcttggtc cttgtctcag 150
 cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
 ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccctccctat 250
 aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300
 tgattgcctt catgttgttg agcccatgcc tgtgcggggg cctgatgtag 350
 aagcatactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400
 acaatcaagg ttaccattat aatttatctc tccattttgg gccttctact 450
 tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500
 tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
 cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
 caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
 tocaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700
 ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
 agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
 ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
 ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
 aaagtgcagg aataagtcct ttocctatttg tgacttttac taataaaaaa 950
 aaatctgcct gtaaaattatc ttgaagtctt ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 tttgtgtgtt ttgttttttg tttgtttgtt ttgtggggag aggggagggg 1100
 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaac 1150
 ttttgaatat agacettacc ttctatttcc gagtttcatt tatattttgc 1200
 agtgtagoca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaagt cctgggtgct ttccacaaaa agcagatttt ctctatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgtctagtt 1400
 tactctaaag actaaacata gtcttggtgt gtgtggtctt actcatcttc 1450
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 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtctg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggtctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
gctcttcatc ttggatttga aagttgagag cagcatgttt tgccactga 100
aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggagtgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgtctatac 300
tattactcca atctcagtggt gcttattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggg tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcgggtgta ctgcatgtgc ttccagagga 500
gccccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
tcaggacggc gcgcaaagga ggagattgta ttctgttact accacaaact 650
caggatgtct gtggagtact cccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgtctcaa 750
ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctgtgt ttcaagaaaa ccattgtgct gcattgtcag ccggaagagc 850
ctcgaacact ggtgaccccg gcagccctga ggcctctggt cttgggtggt 900
aatcagttgg tgatcattgt ggaattgtc tgtgccacaa tctgtgtgct 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
 ctccccata attgtacggg aggtgatcga ggaagaagaa ccaagtgaag 1150
 aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
 ggtgggact ctctctgtg tgtgtcctgg gccactctac cagtgatttc 1350
 agactcccg ctcctccagct gtctcctgt ctcattgttt ggtcaatata 1400
 ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450
 gaacaggcct gctgagggga ggggagcatg gactttggcct ctggagtgga 1500
 acactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
 ggatcagacc ctctgtggg cagggttctt agtggatgag ttactgggaa 1600
 gaatcagaga taaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Leu	Pro	Val	Leu	Leu	Asp	15
1				5					10						
Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	30
				20					25						
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	45
				35					40						
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	60
				50					55						
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	75
				65					70						
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	90
				80					85						
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	105
				95					100						
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	120
				110					115						
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	135
				125					130						
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	150
				140					145						
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	

acatcacctt aaatattaaa actcggaac cagctctgtg ctccgttggc 250
 cctgcatcct cctcctggtg gcgtgtgatg gctttgattc tgctgatcct 300
 gtgcgtgggg atggttgtcg ggctggtggc tctggggatt tggctgtgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggtc ataaatgcag cccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agagggaaggc tggcatgacc 850
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 aaaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424

Met	Gln	Asp	Glu	Asp	Gly	Tyr	Ile	Thr	Leu	Asn	Ile	Lys	Thr	Arg
1				5					10					15
Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp
			20						25					30
Arg	Val	Met	Ala	Leu	Ile	Leu	Leu	Ile	Leu	Cys	Val	Gly	Met	Val
			35						40					45
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
			50						55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
			65						70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
			80						85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
			95						100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
			110						115					120
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgcctc cctgcc a 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcctc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcagtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

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<210> 494
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<213> Homo Sapien

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cagcccgcg cggagccgga ccgcgcgcg aggcagctcg acgcatgct 150
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aggctaagga gaccaaagcg gcgaagtcg gagacagcgg acaagcagcg 250
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300
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agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

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<210> 495
 <211> 245
 <212> PRT
 <213> Homo Sapien

<400> 495

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				20					25					30
Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val
				35					40					45
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg
				50					55					60
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser
				65					70					75
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp
				80					85					90
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile
				95					100					105
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys
				110					115					120
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu
				125					130					135
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn
				140					145					150
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser
				155					160					165
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met
				170					175					180
Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu
				185					190					195
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His
				200					205					210
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys

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 230 235 240
 His Asn Glu Ser Thr
 245

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 <211> 1471
 <212> DNA
 <213> Homo Sapien

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 tggggggatt tcagtgaaaa aagtggggga tcccctccat ttagagtgtg 200
 gcaaaggaaa aaacaccaag gttgggttcc ttctgacat tggcagtgcc 250
 ccagtagggg tgggatgagc gaatattccc aaagctaaag tcccacacc 300
 tgtagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350
 aaagtgctct gaagatatatt aaaccacgtc ttggaaattt agtgggtctt 400
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaagg 450
 gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500
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gcttgacaa ggagggccag gtcataagg gaaaccgagt taagaagacc 1300
aaggcagctg cccactttct gcccaagctc ctggagggtg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctccccctcc agtccccctg 1400
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ccagccacca ccacaacctg t 1471

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<212> PRT
<213> Homo Sapien

<400> 497
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Cys Pro Arg Gly Thr Lys Ser Leu Cys Gln Lys Gln Leu Leu Ile
35 40 45
Leu Leu Ser Lys Val Arg Leu Cys Gly Gly Arg Pro Ala Arg Pro
50 55 60
Asp Arg Gly Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu
65 70 75
Phe Cys Arg Gln Gly Phe Tyr Leu Gln Ala Asn Pro Asp Gly Ser
80 85 90
Ile Gln Gly Thr Pro Glu Asp Thr Ser Ser Phe Thr His Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Thr Ile Gln Ser Ala Lys
110 115 120
Leu Gly His Tyr Met Ala Met Asn Ala Glu Gly Leu Leu Tyr Ser
125 130 135
Ser Pro His Phe Thr Ala Glu Cys Arg Phe Lys Glu Cys Val Phe
140 145 150
Glu Asn Tyr Tyr Val Leu Tyr Ala Ser Ala Leu Tyr Arg Gln Arg
155 160 165
Arg Ser Gly Arg Ala Trp Tyr Leu Gly Leu Asp Lys Glu Gly Gln
170 175 180
Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Ala Ala Ala His
185 190 195
Phe Leu Pro Lys Leu Leu Glu Val Ala Met Tyr Gln Glu Pro Ser
200 205 210
Leu His Ser Val Pro Glu Ala Ser Pro Ser Ser Pro Pro Ala Pro
215 220 225

<210> 498
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<212> DNA
<213> Homo Sapien

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gcaagaaccg cgggctctgc aacggcaacc tggtgatgat ctctccaaa 150
gtgcgcatct tcggcctcaa gaagcgacgg ttgcggcgcc aagatcccca 200
gtcacaaggt atagtacca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctogatgaa ccaaggatga cagcactaat 300
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gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400
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tggtagagcc tgggttttgg gattaaataa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
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<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
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20 25
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45
35 40
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60
50 55
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75
65 70
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90
80 85
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105
95 100
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120
110 115

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
 125 130 135
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
 140 145 150
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
 155 160 165
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
 170 175 180
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
 185 190 195
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
 200 205 210
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
 215 220 225
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 230 235 240
 Val Asn Lys Ser Lys Thr Thr
 245

<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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 tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtggt ctgacataaa taaataatct taaagcagct gttcccoctc 300
 ccaccccaaa aaaaaaggat gattggaat gaagaaccga ggattcacaa 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaagaagt 450
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 aattaataat acatctgcaa agaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag goattgattg ggggagagaa accagcagag cacagttgga 600
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 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaacaa 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
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 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln
 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480

Val Val Asp Trp Glu Thr Thr Asn Val Thr Thr Ser Leu Thr Pro
 485 490 495
 Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr
 500 505 510
 Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr
 515 520 525
 Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala
 530 535 540
 Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His
 545 550 555
 Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn
 560 565 570
 Val Asp Asp Glu Ile Thr Gly Asp Thr Pro Met Glu Ser His Leu
 575 580 585
 Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser
 590 595 600
 Tyr Lys Ser Pro Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn
 605 610 615
 Ser Ile His Ser Ser Val His Glu Pro Leu Leu Ile Arg Met Asn
 620 625 630
 Ser Lys Asp Asn Val Gln Glu Thr Gln Ile
 635 640

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
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 agcaactgag cggggaagcg cccgcgtccg gggatcgga tgccctcct 200
 ccttctctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250
 ctgagatcaa gagagtggca gaggaaaag tcactttgcc ctgccaccat 300
 caactggggc ttccagaaaa agacactctg gatattgaat ggtgctcac 350
 cgataatgaa gggaaccaa aagtgggtgat cacttactcc agtcgtcatg 400
 tctacaataa cttgactgag gaacagaag gccgagtggc ctttgcttcc 450
 aatttctg caggagatgc ctcccttgag attgaacctg tgaagcccag 500
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<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503
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 Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp
 35 40 45
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
 50 55 60
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu
 65 70 75
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
 80 85 90
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp
 95 100 105
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val
 110 115 120
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro
 125 130 135
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
 140 145 150
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
 155 160 165
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro
 170 175 180
 Pro Lys Ser Arg Ile Asp Tyr Asn His Pro Gly Arg Val Leu Leu
 185 190 195
 Gln Asn Leu Thr Met Ser Tyr Ser Gly Leu Tyr Gln Cys Thr Ala
 200 205 210
 Gly Asn Glu Ala Gly Lys Glu Ser Cys Val Val Arg Val Thr Val
 215 220 225

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly
 230 235 240
 Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu
 245 250 255
 Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Arg Pro
 260 265 270
 Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val
 275 280 285
 Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly
 290 295 300
 Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln
 305 310 315
 Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr
 320 325 330
 Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro
 335 340 345
 Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro
 350 355 360
 Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val
 365 370

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
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 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttcagct tagtcccgaa gaccaggggac cgctggacat cgagtggctg 250
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 aattttacac tgtcagatat tggcacatat cagtgcgaaag tgaaaaaagc 450
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 cttctataaa aataagtttg atggtttggc ccatctaact tcactactat 1950
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aaaaaaaaa 3060

<210> 505
<211> 352
<212> PRT
<213> Homo Sapien

<400> 505
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Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
20 25 30
Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
35 40 45
Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
50 55 60
Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
65 70 75
Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
80 85 90
Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
95 100 105
Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
110 115 120
Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

125	130	135
Val Val Leu Val Lys Pro Ser Gly Ala	Arg Cys Tyr Val Asp Gly	
140	145	150
Ser Glu Glu Ile Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro Lys	
155	160	165
Glu Gly Ser Leu Pro Leu Gln Tyr Glu Trp	Gln Lys Leu Ser Asp	
170	175	180
Ser Gln Lys Met Pro Thr Ser Trp Leu Ala	Glu Met Thr Ser Ser	
185	190	195
Val Ile Ser Val Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr Tyr	
200	205	210
Ser Cys Thr Val Arg Asn Arg Val Gly Ser	Asp Gln Cys Leu Leu	
215	220	225
Arg Leu Asn Val Val Pro Pro Ser Asn Lys	Ala Gly Leu Ile Ala	
230	235	240
Gly Ala Ile Ile Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly Leu	
245	250	255
Ile Ile Phe Cys Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr Glu	
260	265	270
Lys Glu Val His His Asp Ile Arg Glu	Asp Val Pro Pro Pro Lys	
275	280	285
Ser Arg Thr Ser Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His Ser	
290	295	300
Ser Leu Gly Ser Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser Lys	
305	310	315
Thr Gln Tyr Asn Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr Pro	
320	325	330
Gln Ser Pro Thr Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr Lys	
335	340	345
Thr Asp Gly Ile Thr Val Val		
350		

<210> 506

<211> 1705

<212> DNA

<213> Homo Sapien

<400> 506

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gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

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 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
 gaaggtgcct ctggatgctg tgaagagtct acagagaaga ttctgtatt 1100
 tattacaact ctatttaatt aatgtcagta ttcaactga agttctattt 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
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 ttgttaaaaa acagagaggg atgcttggtg gtaaaactga acttcagagc 1350
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 ggggtaaggt goactctgtt gaaaagtaaa cgataaaatg tggattaaag 1450
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 tcgccagctc accccatcat ccccttcctt tgggtccctc cttttttttt 1550
 tatcctatgc attcttcctt aatcttcac ttgagtgtca agctgacctt 1600
 gctgatgggt acattgcacc tggatgtact atccaatctg tgatgacatt 1650
 ccctgctaataaaaagacaac ataactcaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met Asn Phe Gln Gln Arg Leu Gln Ser Leu Trp Thr Leu Ala Arg
1 5 10 15
Pro Phe Cys Pro Pro Leu Leu Ala Thr Ala Ser Gln Met Gln Met
20 25 30
Val Val Leu Pro Cys Leu Gly Phe Thr Leu Leu Leu Trp Ser Gln
35 40 45
Val Ser Gly Ala Gln Gly Gln Glu Phe His Phe Gly Pro Cys Gln
50 55 60
Val Lys Gly Val Val Pro Gln Lys Leu Trp Glu Ala Phe Trp Ala
65 70 75
Val Lys Asp Thr Met Gln Ala Gln Asp Asn Ile Thr Ser Ala Arg
80 85 90
Leu Leu Gln Gln Glu Val Leu Gln Asn Val Ser Asp Ala Glu Ser
95 100 105
Cys Tyr Leu Val His Thr Leu Leu Glu Phe Tyr Leu Lys Thr Val
110 115 120
Phe Lys Asn His His Asn Arg Thr Val Glu Val Arg Thr Leu Lys
125 130 135
Ser Phe Ser Thr Leu Ala Asn Asn Phe Val Leu Ile Val Ser Gln
140 145 150
Leu Gln Pro Ser Gln Glu Asn Glu Met Phe Ser Ile Arg Asp Ser
155 160 165
Ala His Arg Arg Phe Leu Leu Phe Arg Arg Ala Phe Lys Gln Leu
170 175 180
Asp Val Glu Ala Ala Leu Thr Lys Ala Leu Gly Glu Val Asp Ile
185 190 195
Leu Leu Thr Trp Met Gln Lys Phe Tyr Lys Leu
200 205

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggtctcagg agatgtctga ttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac ctcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgtctg gtgaccaaga acctcctggc gttctactgt gacagggtgt 300

tcaaggatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350
 attgccaaact ctttctctta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcaactgca ggcagggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaatatcc 500
 ctggggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaacctg tatagtgtac cagggatgaa 600
 caccocctgt gcggtttact gtgggagaca gccaccttg aagggggaag 650
 agatggggaa ggcoccttgc agctgaaagt cccactggct ggctcaggc 700
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 tgccctccca tctaatttat tgtaaagtca tatagtcac gtctgtgatg 850
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 ataaattcca tattttacct atga 924

<210> 509
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 509
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45
 Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
 50 55 60
 Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
 65 70 75
 Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
 80 85 90
 Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
 95 100 105
 Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
 110 115 120
 Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
 125 130 135
 Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
 140 145 150
 Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
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tccacaggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgccctca 250
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gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450
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cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
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tacgacgtct accactctcc toagtatcac ttctgtgtca gtctgggccc 650
ggcgaagaga gccttctctg caggcatgaa cccacccccc tactcccagt 700
tcctgtcccc gaggaacgag atccccctaa ttacttcaa ccccccata 750
ccacgggggc acaccgggag cgccgaggac gactcggagc gggacccct 800
gaacgtgctg aagccccggg ccgggatgac cccggccccc gcctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaccca 900
ttaggggttg tcagggggcg tcgagtgaac acgcacgctg ggggaacggg 950
cccgaaggc tgccgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
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Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu Leu Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala
 35 40 45
 Thr Ala Arg Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His
 50 55 60
 Val Asp Gly Ala Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile
 65 70 75
 Arg Ser Glu Asp Ala Gly Phe Val Val Ile Thr Gly Val Met Ser
 80 85 90
 Arg Arg Tyr Leu Cys Met Asp Phe Arg Gly Asn Ile Phe Gly Ser
 95 100 105
 His Tyr Phe Asp Pro Glu Asn Cys Arg Phe Gln His Gln Thr Leu
 110 115 120
 Glu Asn Gly Tyr Asp Val Tyr His Ser Pro Gln Tyr His Phe Leu
 125 130 135
 Val Ser Leu Gly Arg Ala Lys Arg Ala Phe Leu Pro Gly Met Asn
 140 145 150
 Pro Pro Pro Tyr Ser Gln Phe Leu Ser Arg Arg Asn Glu Ile Pro
 155 160 165
 Leu Ile His Phe Asn Thr Pro Ile Pro Arg Arg His Thr Arg Ser
 170 175 180
 Ala Glu Asp Asp Ser Glu Arg Asp Pro Leu Asn Val Leu Lys Pro
 185 190 195
 Arg Ala Arg Met Thr Pro Ala Pro Ala Ser Cys Ser Gln Glu Leu
 200 205 210
 Pro Ser Ala Glu Asp Asn Ser Pro Met Ala Ser Asp Pro Leu Gly
 215 220 225
 Val Val Arg Gly Gly Arg Val Asn Thr His Ala Gly Gly Thr Gly
 230 235 240
 Pro Glu Gly Cys Arg Pro Phe Ala Lys Phe Ile
 245 250

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
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 ctgctgggag gttggggtct ctgggagctc tgcaggcccc agcaccgcga 150
 gaggcagcac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagaccgg gccacgccgc tctgaaaact caaacgctga gcgctgagac 250
 ctcttctag gctcaacc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag ttccacaaaa 350
 acatctccca acttcattgt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtgcc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccaggagg gccatctttg acaccctttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattgggtca 550
 cacctccaca gaagctaagg gctgtctctc agagagcagt gctcttccg 600
 acggccccc tccagtcatc acccctgcac gggcctcaga gacgagcgcc 650
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 cagcgctctc tccgacggcc cccatccagt catcaccccg tcatgggtcc 750
 cgggatctga tgtcactctc ctgctgaag cctggtgac tgtcacaaac 800
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 gggcagcatg tccaagccc taacccaga tgtggcaaca ggacctcgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttccca 1900

gggtgccttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950
 acctgatcac ccatctgtgt gcttccatcc tgcattaaaa ttactcagt 2000
 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
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 Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
 20 25 30
 Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr Glu Ile Glu Thr Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp
 260 265 270
 Ile Asp Leu Ile Pro Thr Glu Gly Val Lys Ala Ser Ser Thr Ser
 275 280 285
 Asp Pro Pro Ala Leu Pro Asp Ser Thr Glu Ala Lys Pro His Ile
 290 295 300
 Thr Glu Val Thr Ala Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr
 305 310 315
 Thr Glu Ser Ala Ala Pro His Ala Thr Val Gly Thr Pro Leu Pro
 320 325 330
 Thr Asn Ser Ala Thr Glu Arg Glu Val Thr Ala Pro Gly Ala Thr
 335 340 345
 Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu
 350 355 360
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val
 365 370 375
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly
 380 385 390
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro
 395 400 405
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr
 410 415 420
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro
 425 430 435
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr
 440 445 450
 Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met
 455 460 465
 Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro
 470 475 480
 Gln Thr

<210> 514
 <211> 2284
 <212> DNA
 <213> Homo Sapien

<400> 514
 gcggagcattc cgctgcggtc ctgcgcgaga ccccgcgcg gattcgccgg 50
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 ggcgcggggg tctctctgac gccagagaga aatctcatca tctgtgcagc 150
 cttcttaaag caaactaaga ccagaggagg gattatcctt gacctttgaa 200
 gaccaaact aaactgaaat taaaatgtt cttcggggga gaagggagct 250

tgaacttaac	tttgttaata	atttgcctcc	tgacaactaag	gotgtctgct	300
agtcagaatt	gocctcaaaa	gagtctagaa	gatgttgtca	ttgacatcca	350
gtcatctctt	tctaagggaa	tcagaggcaa	tgagcccgta	tatacttcaa	400
ctcaagaaga	ctgcattaat	tcttgctgtt	caacaaaaaa	catatcaggg	450
gacaaagcat	gtaacttgat	gatctctgac	actcgaaaaa	cagctagaca	500
acccaactgc	tacctatttt	tctgtcccaa	cgaggaaagc	tgtccattga	550
aaccagcaaa	aggacttatg	agttacagga	taattacaga	ttttccatct	600
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acatggccaa	ttttcacaag	cagtcactcc	cctagcccat	catcacacag	700
attatttcaa	gcccaccgat	atctcatgga	gagacacact	tctctcagaag	750
tttggatcct	cagatcacct	ggagaaaacta	tttaagatgg	atgaagcaag	800
tgcccagctc	cttgcttata	agggaaaaag	ccattctcag	agttcacaat	850
tttctctotg	tcaagaaata	gotcatctgc	tgoctgaaaa	tgtgagtgcg	900
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cttcccagcc	acagctggcc	accacagctc	cacttgtaac	cactgtcact	1050
tctcagcctc	ccagaccctt	cattttctaca	gtttttacac	gggctgcggc	1100
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 gttttatgtt tgggttttga gaaggaatga agtggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
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 tatgcaaaga aacaggtttag gacatctagg ttccaattca ttcacattct 2150
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 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 515
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 Ile Cys Phe Leu Thr Leu Arg Leu Ser Ala Ser Gln Asn Cys Leu
 20 25 30
 Lys Lys Ser Leu Glu Asp Val Val Ile Asp Ile Gln Ser Ser Leu
 35 40 45
 Ser Lys Gly Ile Arg Gly Asn Glu Pro Val Tyr Thr Ser Thr Gln
 50 55 60
 Glu Asp Cys Ile Asn Ser Cys Cys Ser Thr Lys Asn Ile Ser Gly
 65 70 75
 Asp Lys Ala Cys Asn Leu Met Ile Phe Asp Thr Arg Lys Thr Ala
 80 85 90
 Arg Gln Pro Asn Cys Tyr Leu Phe Phe Cys Pro Asn Glu Glu Ala
 95 100 105
 Cys Pro Leu Lys Pro Ala Lys Gly Leu Met Ser Tyr Arg Ile Ile
 110 115 120
 Thr Asp Phe Pro Ser Leu Thr Arg Asn Leu Pro Ser Gln Glu Leu
 125 130 135
 Pro Gln Glu Asp Ser Leu Leu His Gly Gln Phe Ser Gln Ala Val
 140 145 150
 Thr Pro Leu Ala His His His Thr Asp Tyr Ser Lys Pro Thr Asp
 155 160 165
 Ile Ser Trp Arg Asp Thr Leu Ser Gln Lys Phe Gly Ser Ser Asp
 170 175 180
 His Leu Glu Lys Leu Phe Lys Met Asp Glu Ala Ser Ala Gln Leu
 185 190 195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
 200 205 210
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
 215 220 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
 230 235 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
 245 250 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
 260 265 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
 275 280 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
 290 295 300
 Ala Val Leu Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly
 305 310 315
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
 320 325 330
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn
 335 340 345
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
 350 355 360
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
 365 370 375
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
 380 385 390
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
 395 400 405
 Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu
 410 415 420
 Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile
 425 430

<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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ctgaggggacc accggaagta ctggtgcagg aagggtggga tcctcttctc 200
tcgtctgtctt ggcacatct atgcagaaga agaaggccag gagacaatga 250
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Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	85	90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	100	105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	115	120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	130	135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	145	150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	160	165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	175	180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	190	195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	200	205	210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	215	220	225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	230	235	240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Ile	Ala	Pro	Val	Leu	Val	Leu	245	250	255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	260	265	270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	275	280	285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	290	295	300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	305	310	315
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